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The American Journal of Clinical Medicine

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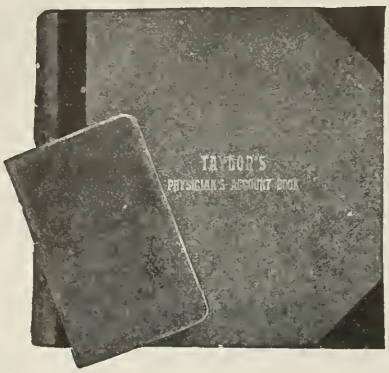

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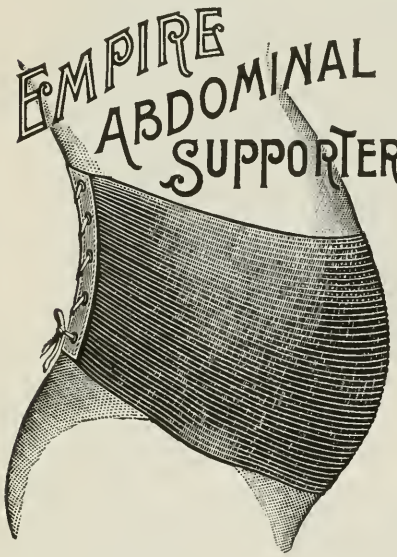

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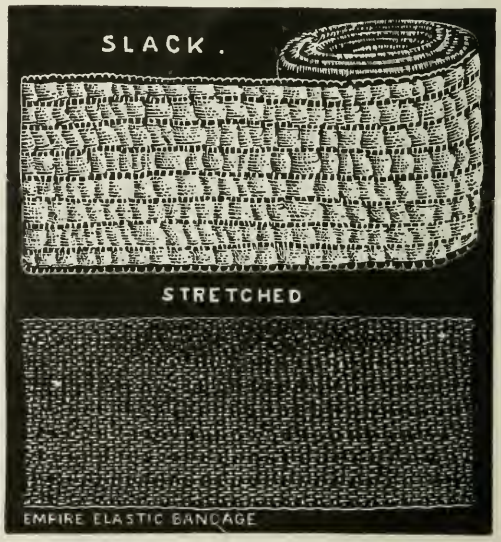

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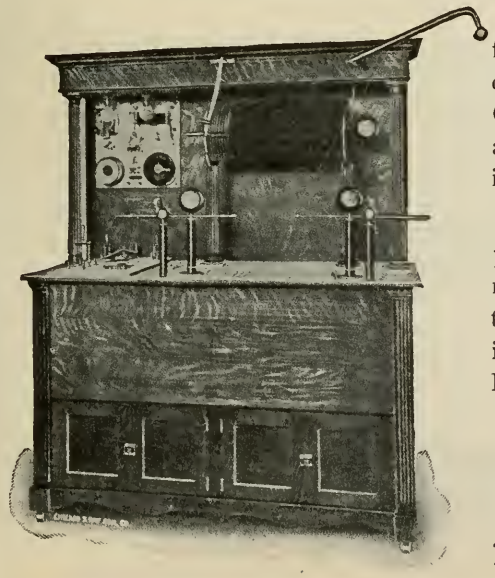

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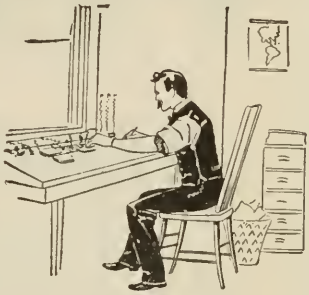

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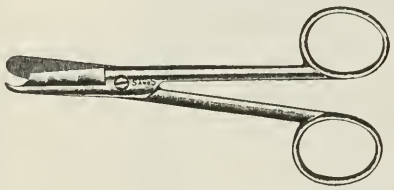

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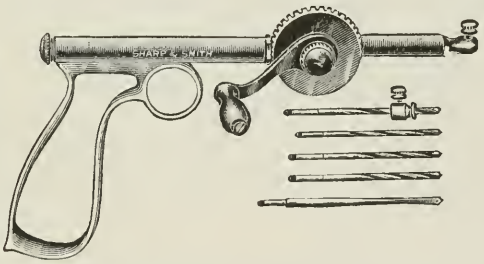

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The American Journal of Clinical Medicine

Vol. 16 MAY, 1909 No. 5

More Work for You

Another plea for the clinical study of the native American medicinal plants and their active principles. Why not do some of this work? We make a few suggestions

WE have repeatedly called the attention of our readers to the fact that the group of men who direct the work of THE AMERICAN JOURNAL OF CLINICAL MEDICINE are by no means the only men who have duties. In fact we look upon our journal simply as a good clearing-house for the entire medical profession. We look over the medical literature of the world, and if anything is offered that seems worthy of your attention we publish what we can find concerning it. This then goes to our many thousands of readers. Some of you among them pick up the suggestion and give the new remedy a trial. Some of those who do so report, and by those who report our future action is directed. Many of you report to us that the remedy has been successful along the lines indicated, and we take it up, and search for every item in regard to it that can be found. But if few or none of you mention the remedy, we conclude that those who have tried it have not found it available and we give it no further attention.

There is one department in this work, however, in which we desire earnestly to interest you. It is not by any good will of our own that we turn to Europe for new suggestions. Nor do we especially care to exploit synthetic chemicals and similar drugs over which some drug-house has a monopoly. We would rather take up such articles as any doctor could obtain wherever he pleased, without paying tribute to any manufacturing interest. As an instance, we believe there are a number of native American plants which contain active principles well worth trying; and they should be so investigated.

In the las issue of *The Gulf State Medical Journal* one writer gives a list of several hundred native Alabama plants. Looking over this list we find that no less than forty-nine of them are represented in our list of remedial agents. Few of these are presented as active principles, properly socalled; however, among these few there are some of the most valuable additions made in recent times to modern therapeutics. We will only mention, in this connection, gelseminine,

solanine and cicutine. As to the majority of the others we are compelled to be satisfied with what are known as "concentrations," that is, purified extract , as being the only preparations of the plant which have yet been supplied in such a state that we could use them.

Nobody can investigate the vegetable materia medica without being amazed, first, at the wealth of therapeutic weapons contained therein, and, second, at the neglect with which this rich storehouse is treated.

Most of the work which has been done in this field we owe to the eclectics; and it is a notable fact that whenever a combination of socalled eclectic remedies is put upon the market, it has found favor with the regular school. We need here only refer to such well-known remedies as celerina, Hayden's viburnum compound, aletris cordial, and elixir of helonias. To most of these remedies the objection stands, as heretofore, that their advocates, as in times now long past, fail to differentiate, first, the effects of the remedy as separated from those of the disease, and, further, to distinguish sequences from consequences.

The whole materia medica needs to be restudied in the light of modern physiology and pathology. It is safe to say that many old-time remedies, and those that have already won favor, will be looked upon in an entirely different manner when such studies have been made.

In another direction there is room for an enormous amount of work on your part, in testing the merits of active principles which have not been introduced into general medical practice. The writer has just been looking over Merck's "Index" to see whether there were any active principles in that list that are not employed. We append a list of a number of such agents whose names commence with the letter "A." Some of these are used to a slight extent, most of them not at all.

Who knows what rich results may follow the investigation of some one or more of these neglected principles, and how many more could be culled from the rest of the list.

Abrin, vegetable agglutinin.
Absinthin tonic.
Abyssinin, arrow poison.
Achillein, stimulant, aperient, tonic, emmenagog, hemostatic, alterative.
Acid, anacardic, anthelmintic.
Acid, angelic, aromatic, tonic.
Acid, anisic, antiseptic, analgesic, antipyretic.
Acid, caincic, diuretic, cathartic, emetic.
Acid, camphoric, antihidrotic, astringent, anticatarrhal.
Acid, cathartic, cathartic.
Acid, cinnamic, antituberculous, lupus.
Acid, embolic, anthelmintic.
Acid, ergotic, hemostatic, no action on uterus.
Acid, filicic, anthelmintic.
Acid, gluconic, diabetic coma.
Acid, gymnemic, obtunds taste for sweet or bitter.
Acid, gynocardic, tuberculosis, syphilis, rheumatism, leprosy.
Acid, osmic, antineuralgic, antiepileptic, caustic.
Acid, picric, antimalarial, trichina.
Acid, quinic, uricemia.
Acid, vanadic, tuberculosis.
Acoin, local anesthetic.
Ampelopsin, alterative, tonic, expectorant.
Anagyrine, heart-tonic.
Anhalonine, angina, asthma, dyspnea.
Apocodeine, increases saliva and intestinal peristalsis.
Arecoline, anthelmintic, cathartic.
Artemisine, appetizer.

Vain-glorious men are the scorn of wise men, the admiration of fools, the idols of parasites, and the salves of their own vaunts. —Bacon.

THE THERAPEUTIC APPLICATION OF ALKALIS

In *The British Medical Journal* for January 30 Eustace Smith contributes a short but suggestive paper on the "Application of Alkalis" in clinical medicine. These remedies are among those most commonly used, not only by the profession but by the laity; nevertheless, there are limitations in their application which should not be forgotten.

Taken before meals, alkalis exert first a local action, neutralizing the acidity of the gastrointestinal tract and acting favorably on mucous catarrhs. The doses should be moderate and the alkali should be discontinued as soon as benefit ceases. Excessive doses on an empty stomach increase the secretion of acids; that automatic action of the gastric glands of which we have spoken before is excited in the effort to neu-

tralize the excess of alkali. If this is continued day after day, the final result is debility of the already exhausted organs. Pushing the dose still further, there is a loss of digestive energy, aggravating the derangement and the discomfort. When the alkalis are absorbed into the circulation, the alkalinity of the blood is increased, the secretions are modified, and if long continued, anemia and languor result.

Excreted through the kidneys, the acidity of the urine is decreased or abolished. Immoderate doses induce cystitis or hematuria. A girl, age ten, suffered from cystitis whenever she entered upon a course of potassium citrate. The urine became opalescent in a few hours, turbid and offensive before the end of a week. This was an exceptional case.

It must not be forgotten that the acidity of the urine may be reduced without modifying the faulty conditions on which the excessive acidity depends.

In gastric catarrh the benefit from alkalis is dec ded. This is due to an action restoring the deranged mucous membrane to normal conditions. The secretion of gastric juice may be excessive from irritation of the mucous membrane, from emotion, or from a sedentary occupation combined with lack of exercise. These patients suffer greatly from weight or discomfort at the epigastrium, with sour eructat ons and often vomiting. The relief in such cases obtained from alkalis is due to local action upon the walls of the stomach. The improvement is not always transitory. Prolonged benefit often follows a course of alkaline waters at a resort, but here the effect is by no means to be attributed wholly to the water.

The dose must be quite moderate. The citrates or acetates are preferable as not becoming alkaline until they undergo a chemical change in the blood; they do not tax the gastric energies or call on the stomach for increased effort, to which at the time it may be unequal. These remedies must be used with judgment. The moment anemia suggests itself their use should be abandoned.

In chronic ailments no benefit results from impoverishing the blood.

In stomach disorders the bicarbonates are efficacious. Ten to twenty grains usually suffices for adults. A little sodium chloride may be added, also very small doses of colchicum. This combination Smith recommends as a useful stomachic. Thus prescribed for local action on the stomach, the alkalis should be taken before food. After the first few days the mixture had better be made with a fresh bitter infusion, rather than with plain water. If, however, we are merely desirous to correct acidity, the alkalis should be administered two hours after meals and the bitter should be omitted. As Dr. Prout says, the latter materially reduces the neutralizing properties of the alkalis.

When the stomach is very irritable, the dose should be made effervescent with citric acid, added at the time of administration. A minute dose of antimony increases the sedative effect. Twenty grains of sodium bicarbonate, and 5 of sodium chloride, with one drop of antimonial wine in a bitter infusion may be made effervescent with 16 grains of citric acid. The soda should not be completely neutralized. This dose may be taken before each meal.

The caustic alkalis are more decidedly sedative to the stomach than the bicarbonates, and may be given with a little potassium nitrate in a bitter infusion, in a continued dyspepsia with obstinate constipation and abdominal pains. Dr. Smith recommends 20 minims of liquor potassæ, with 1 ounce each of infusion of rhubarb and compound infusion of gentian, taken regularly for a week, or longer, every morning before breakfast.

We congratulate Dr. Smith on having patients who are willing to take such doses on his recommendation. The reply to such a suggestion in urban America would be to "telephone for another doctor."

Long courses of alkalis are rarely of service in flatulent dyspepsia, although very useful in the early stages. When the catarrh has been subdued, the gastric mucosa is flabby and relaxed and different medicines are required. Alkalis rarely benefit dyspepsia if the urine is habitually alkaline or but

slightly acid, or when the tongue is of good color and clean, or pale, flabby, and indented with the teeth. Soda can be borne much longer than potassa, the latter depressing the heart.

Magnesium carbonate with rhubarb is invaluable in the treatment of stomach derangement in children. For mild diarrhea it is better to combine rhubarb with aromatic chalk. For infants this is made into a paste with molasses and smeared on the back of the child's tongue.

To neutralize acid in the cecum the insoluble carbonate or oxide of magnesium are utilized, as these are more likely to pass unaltered through the stomach. Pains in the lower bowels, due to flatulence and spasmodic contraction, yield quickly to insoluble magnesium compounds. This should be combined with small doses of codeine, compound spirit of ammonia, and aromatics. These compounds are more irritating than the soluble sulphates of sodium and of magnesium. Trousseau long ago showed that when given continuously, magnesium sulphate exerts less effect, while the insoluble compounds have greater effect with each succeeding dose, and soon lead to the passage of mucus, often blood-stained, and to painful evacuations.

Alkalis are especially useful in the treatment of urinary acidity and the discharge of sand and gravel. Roberts remarked that it is chemically impossible for uric acid to be deposited from an alkaline urine. The use of a water such as the Vichy prevents the deposition of sand for a considerable time after the water has ceased to be taken. It seems possible that a long course of alkali may result in a diminution of the size of uric-acid calculi, so that they may pass through the urinary ways and be discharged. The citrate of potassium is especially recommended for that purpose, as it may be taken in moderate doses for a long time.

Lithia should be used with caution, exerting a poisonous action in large doses. It is said also to form an insoluble compound with triple phosphate of sodium and ammonium. Its solvent action on uric acid in the living organism has been questioned. Sodium citrate has been recommended to be used when feeding infants, to prevent the formation of a firm clot by the casein of the milk. The proportion ordinarily is one or two grains of the citrate to each ounce of milk.

When sodium bicarbonate is taken for a long period it should be combined with a little sodium chloride, the latter having the property of aiding metabolism and increasing the vitality and resistance of the red blood-cells. It also counteracts the tendency of the bicarbonate to form uric-acid concretions.

Even with the foregoing safeguard the protracted use of the bicarbonate should not be recommended, as lessening digestive energy and inducing anemia and depression. In severe acid dyspepsia, however, large doses of sodium bicarbonate may be given for short periods. For great acidity toward the end of digestion, from acid fermentation, 30 or 40 grains in a single dose three hours after meals will often quickly allay the distressing symptoms, especially if combined with compound spirit of ammonia and aromatics. Painful cramps, often afflicting habitual dyspeptics, may be stopped by the same remedy taken at bedtime. Dr. Piorry advised 40 to 160 grains of the bicarbonate three or four times a day in pyrosis. These doses are quite unnecessary for this unpleasant symptom, which rarely resists compound kino powder, 5 to 10 grains given several times a day, as recommended by Watson. In suppression of urine, sodium bicarbonate in 40- or 50-grain doses every four hours sometimes induces a return of the secretion, especially in conjunction with spirit of nitrous ether. The suppression occurring at the end of an attack of enteric fever or of scarlet-fever is most rapidly brought to an end by enemas of hot water retained as long as possible.

The alkalis are useful in acute bronchitis, with viscid and thick secretions. Liquor potassæ is here preferable. In acute bronchitis, with fever, dyspnea and lessened acidity of urine, Dr. Haig recommends sodium bicarbonate, enough to render the

urine alkaline, when the temperature falls and all symptoms are quickly relieved. From 90 to 120 grains are required for an adult in twenty-four hours. Ammonium must not be given at the same time. If a cardiac tonic is needed, digitalis is preferable.

Dr. Smith then refers to the loca applications of sodium bicarbonate for many skin diseases, ulcers, prurigo, leucorrhea, tonsillitis, and to relieve the aching in a decayed tooth, which is due to irritation of the nerves by acid saliva.

Our thanks for that increasing torch of light
The tireless hand of science holds abroad.
And may its glowing blaze shine on all hidden ways
Till man beholds the silhouette of God.
—Ella Wheeler Wilcox.

PLEURISY

To *The Chicago Medical Times* Prof. Graves contributes a short paper on the treatment of pleurisy. He orders absolute rest in bed, thorough ventilation of the room, and careful attention to the bowels. For the latter purpose he recommends one of the tasteless preparations of epsom salt. The patient should drink plenty of water. If the temperature runs over 102° F., free sweating is advisable. The diet should be carefully regulated according to the patient's temperature. If the fever is above 101° F., he should be restricted to liquids. To control pain and prevent the extension of disease he prefers dry-cupping if the case is seen early, followed by a libradol poultice or some one of the glycero-medicated plasters.

As to the medicinal treatment, he recommends bryonia for the characteristic pain. If the skin is very hot and dry asclepias is added. When the pulse is full and bounding veratrum is the remedy of choice. For nervous excitability with bright eyes and pupils gelsemium is selected. If there is but little fever, with cool extremities and skin, mental dulness and general indifference, with dilated pupils, he selects belladonna.

To illustrate the association of pathology, symptoms and medicines, he employs several simple diagrams which we reproduce herewith:

Bryonia is the chief indicated remedy, and one or two of the others are added according to the symptoms. When the disease has extended to the stage of exudation, diagram No. 2 is employed. If the serum is infected by pathogenic germs, he substitutes diagram No. 3.

This is the kind of therapeutic work that counts, and we owe our eclectic brethren a great debt of gratitude for the care with which they are studying the problems of remedial action in the treatment of disease.

THE FUTURE HYGIENE

In *The Central States Medical Monitor* J. N. Hurty contributes an article with the above title, which is so full of good things that we earnestly advise our readers to procure the journal—that for December—and carefully peruse it.

Dr. Hurty mentions one case in which a physician attending a typhoid-fever patient acknowledged that he had not given the slightest direction concerning the disinfection of the discharges, and that he had never given any such directions during his entire years of practice! That doctor was not a reader of CLINICAL MEDICINE, and he did not practise with the Waugh-Abbott Textbook. Had he done so, he would have there found disinfection of the stools most urgently insisted upon. Dr. Hurty says: "Cantacuzena succeeded in killing by vibrionic infection even highly immunized guinea-pigs by preliminary injections of small doses of morphine. This drugging retarded phagocytic action to such an extent that the animals lost their immunity and were rendered an easy prey to the cholera germs."

Besides morphine, alcohol inhibits phagocytic action, and these two much-abused remedies are now known to interfere probably more than any others with the natural defenses of the human body. This also confirms our teaching, for we have strenuously insisted that neither of these drugs is needed or useful in the treatment of disease, and that whatever benefit either of hem may afford in any instance can be better obtained from other remedies that

are not liable to the gross abuse or to do the harm which the remedies named are doing.

Laitivan administered alcohol to rabbits and then injected anthrax vaccine. Six animals thus treated died; while of four controls which had received the same dose of vaccine, but no alcohol, only one died.

Dr. Hurty goes on to quote from Metchnikoff's suggestive observations concerning the hygiene of the alimentary canal. Tubercular infection from food is far more likely to occur when there is constipation, diarrhea or intestinal indigestion. "The future hygiene will insist upon keeping the intestinal canal in normal condition."

This paper is by no means the only good thing in *The Monitor*. This is one of the journals your editor always reads "from cover to cover." It is a privately owned journal, conducted, we sincerely hope, to the profit of its medical owner; and if any real practising physician wants to decide for himself between a machine journal and a privately owned one, all he has to do is to sit down with *The Journal of the Indiana State Medical Society* and *The Monitor*, read each one carefully, and then ask himself which of the two is of greater value to him.

THE SUMMARY

With its March number *The Medical Summary* begins its thirty-first year. *The Summary* is not as pretentious as some of our exchanges, but Dr. Andrews during the period of its existence has given to his readers a really useful journal indeed; a journal well suited to the class of physicians for whom it was intended, namely, the average practician. *The Summary* has been clean, kindly and uplifting in its field during all the years in which we have known it. Andrews is a good man personally, a man who throughout his journalistic career has tried to do right, according to the light that was in him. There are other journals which could be much better spared than *The Summary*. Take any copy and go through it, asking this question: What is there in this which would be likely to give real help in his daily work to the average practising physician? You would not find a great many publications that would count up as many useful suggestions as would *The Summary*. We hope that Dr. Andrews finds his work fully appreciated, and that *The Summary* is as prosperous as it looks.

Just one man in a hundred can see beyond his nose; the short-sighted people are in the majority—and the majority rules. Only imagination can visualize what is to be; most people have no imagination, therefore they doubt and ridicule what they do not comprehend. To them the oak is never apparent in the acorn. —Kaufman

A CANCER SUGGESTION

The *Lancet* presents a curious suggestion in regard to cancer: It has been noticed that the essential characteristic of the cancer cell is its apparently unlimited power of multiplication. The nucleus determines this power of the cell. Is it possible so to act upon the nucleus as to rob it of its abnormal power of proliferation?

Chemically the nucleus consists of nuclein. Cancerous growths are particularly rich in this substance. Certain leucocytes may perhaps supply the stimulus and provide the nourishment for the cancer cells. If nuclein is so important for rapid mitosis, may not this mitosis be considerably modified by its withdrawal from the food altogether, or by chemical action upon it so as to alter its functional activity?

Nuclein is chemically remarkable for its high percentage of phosphorus. Can we substitute for this element a chemical congener without similar activity? It is suggested that for phosphorus in the nuclein molecule the other members of the group to which it belongs may be substituted.

The following proposition is made: The diet for those with carcinomatous tumors to be entirely freed from nuclein and nucleoproteids. Such a diet would correspond somewhat with the purin-free diet of the gouty, and observations on the association between this disease and cancer would be extremely interesting. Cancer has much

greater incidence among those taking a mixed diet than among vegetarians, and a vegetarian as well as a restricted nitrogenous diet has been extolled as beneficial in internal and external cancers. Nuclein-free diet should also be tried in conjunction with the internal administration of arsenic or other members of its group. The action of a phosphorus-free diet with or without arsenic might be tried.

It is doubtful whether the living organism could withstand the entire withdrawal of phosphorus from the food, and it is possible that a cancerous growth might still draw its necessary phosphorus from the nervous system, producing mental depression or other nervous state.

The production artificially of extensive inflammatory conditions, far away from a cancerous growth, withdrawing the leucocytes thereto, noting the effect, if any, might prove interesting, if of no practical importance.

This brings to mind some exceedingly interesting observations that have been reported by several experimenters with nuclein solution. These went to show that nuclein taken in the ordinary doses had no effect whatever upon the progress of cancerous disease. It may be recollected that, in experiments reported some time ago, we found, when nuclein solution is administered hypodermically in doses in excess of 60 minims daily, they resulted in an enormous decrease in the number of leukocytes present in the blood. These observations were made under our directions. The fall averaged from eleven thousand to three thousand per Cc. The experimenters who reported to us stated emphatically that their results were best when half an ounce of nuclein solution, or four times the maximum dose, was administered at a single injection. They claimed that under this treatment, if repeated once or twice a week, the cancerous growth was cured.

If this were confirmed by extensive experience, it is obviously of the greatest importance; for it is certainly not very difficult to administer hypodermic injections of half an ounce of nuclein solution, whereas it would be excessively difficult, if not practically impossible, to establish a diet free from nuclein or from phosphorus.

Only a smile! Yet it cast a spell
Over the sky which had been so gray;
The rain made music wherever it fell;
The wind sang the song of the marriage-bell;
And the heart was light and gay.

OUR "NINE"

We boys decided to organize a baseball nine, and to challenge other clubs. We were popular in the suburb and everybody was interested in us, and contributed generously to our support. The new uniforms were natty, and we felt proud of ourselves, especially when we won the first two games. Our line-up consisted of A. Brown, c., C. Davis, p., E. Flynn, 1st b., F. Grace, 2nd b., G. Hardy, 3rd b., H. Ingham, s. s., I. Jones, l. f., J. Knipe, c. f., K. Lloyd, r. f.

The thi d game we lost, and after canvassing the case, we decided we needed a better pitcher. We secured one, but then our catcher was unable to handle his rapid delivery, and so we engaged another, one who had caught this pitcher before. The next game was won, but we concluded that another first-baseman would work better with the new battery. This broke up the infield, and it was found advisable to add successively a new short-stop, second and third basemen, and some heavy-hitting outfielders. Our nine was finally composed of L. McGinnis, c., M. Nolan, p., T. Ulrich, l. f., O. Peters, 1st b., P. Quinn, 2nd b., R. Shea, 3rd b., S. Tierney, s. s., V. Wilson, c. f., X. Yondorf, r. f.

At the close of the season the club had a meeting, at which a stunning deficiency bill was presented. A full turnout was present, Messrs. Brown, Davis, Flynn, Grace, Hardy, Ingham, Jones, Knipe and Lloyd. We looked at each other and unanimously asked, "Where are we at?"

Now, how does this fit into a medical journal? Does anybody think the medical profession, by creating examining boards, etc., has shoved it elf off the earth?

The medical profession consists of some 140,000 doctors. By restricting candidacy for registration to graduates of a school with a four years' course, and an A. B. for entrance, four-fifths of this number are excluded. By exacting an examination in laboratory work that has come into being only during the last few years, all but the most-recent graduates are excluded.

The doctor is practically restricted to his present State. Here he is closely hedged in by legislation and by the development of popular prejudice against the remedies on which his dependence has been placed. He finds that the manufacturers will supply him only through the retail druggist, or give the latter a rake-off on the doctor's orders. He is threatened with legal restraint in dispensing his medicines, to compel him to prescribe and accept what the retail druggist thinks advisable to supply, the specification of manufacture being forbidden by the proposed legislation. He is told that he must not prescribe certain remedies, because some other persons do not like the men who supply them, or are interested in competitive drugs or drug houses. The public is told that many of his well-tried remedies are in some way objectionable, so that his prescriptions are met with distrust. If he really believes one man's goods are superior and insists on getting them, the druggist, who has cheap substitutes he wants to run in at the same price, "knocks" the doctor.

Where are we at?

AN OLD, YET MODERN, INSTITUTION

The Jackson Health Resort at Dansville, N. Y., has issued an interesting pamphlet commemorative of the fiftieth anniversary o its founding. This institution has reason to be proud of its record. Founded at a time when sanitary science was all but unknown, it has inculcated among physicians and laity the propriety of regulating life by a sound personal hygiene, and sound moral principles; and while taking up new therapeutic measures as they were introduced, they have made an effort to utilize them in their proper place without neglecting the proper applications of drugs.

We congratulate Dr. Jackson and his official aids on the modest, sensible but effective showing made in this pamphlet. Every line of it shows the consciousness of good work done, of plans wisely conceived and effectively carried into execution, without a word of "brag" or extravagance displayed.

As in all other work, the chief factor in success is the power of sticking to one thing. I attribute all that I have accomplished to the fact that I hold on where most persons get discouraged.—Thomas A. Edison.

TETANUS TREATED WITH CHOLESTERIN

In the last number of *International Clinics* Almagia and Mendes describe two cases of tetanus treated with cholesterin and terminating in recovery. By experiments upon animals they arrived at the conclusion that lecithin and cholesterin possess the same property of fixing tetanus toxins as the central nervous substance does *in toto*, but cholesterin proved much more active than lecithin in its power to fix and neutralize the tetanus toxin. Experiments on guinea-pigs showed the value of cholesterin injections in the treatment of animals previously injected with tetanus toxin. The results of these experiments encouraged the writers to attempt this method of treatment on the human subject.

The first case was that of a priest, wounded by a gun-shot in the hand. He had been seven days affected with tetanus. Several times doses of five millions of immunizing unities of Tizzoni's antitoxin had been injected. The symptoms had increased until the condition was threatening. On the seventh day from the beginning of the disease, fifteen centigrams of cholesterin, suspended in ten cubic centimeters of warm distilled water, were injected into the subcutaneous tissue of the external region of the left arm, the member which had been wounded. Morphine and chloral-bromide were also employed, as well as warm baths. The local lesion was treated by washing the

wound with the solution of cholesterin; with the same solution on the dressings. The next day the patient was worse, the duration and the painfulness of the opisthotonic contractions had increased. The injections of cholesterin were continued, the dose being doubled; the same local and general treatment were continued.

During the next three or four days the state of the patient was more or less unchanged, and an eruption of acne pustules appeared, particularly in the upper part of the chest and the right arm. Patches of a red-violet color appeared over the same region, and other similar but lighter in color in the left mammillary region. No injections were used over these parts. The dysphagia had diminished, which was severe before the injections of cholesterin. There was considerable dulling of the intellect, together with subdelirium, and illusions and hallucinations made their appearance. The dose of cholesterin was gradually increased, until an average of 1 1-2 Grams a day was reached, the administration being invariably by subcutaneous injections over various parts of the body.

On the fifth day of the treatment with cholesterin improvement in the tetanic symptoms was noted. The abnormal mental state persisted, with occasional intervals of consciousness, until the thirteenth day of the patient's sojourn in the hospital. On that day it could be noted that the condition of the mind was perfectly normal, and the tetanic symptoms, excepting some rare opisthotonic contractions, had disappeared. There remained only the strong, permanent flexion of the wounded hand, due to the extensive destruction of the extensors.

The wound showed a tendency toward healing. Complete recovery followed in fifteen days from the beginning of the treatment. During this time 15 Grams in all of cholesterin had been administered subcutaneously. From this on the treatment was confined to the wound itself.

The second case was a wagoner, 19 years of age, admitted for tetanus following an injury of the left thumb from a hammer. Tetanic symptoms commenced five days before entrance to the hospital. The condition of the patient remained unaltered for four days, during which time 8 Grams of an emulsion of cholesterin in distilled water were administered subcutaneously. No other remedy was employed. By that time a diminution in the frequency and intensity of the opisthotonic contraction was noted, the disturbances of deglutition and respiration being somewhat relieved. Trismus persisted unaltered. The daily dose of cholesterin was increased until 2 Grams and 8 decigrams a day were reached as a maximum. Nine days after admission, fourteen days after the beginning of the tetanic symptoms, the patient was much better. He had been for some time free from convulsions and the trismus had diminished. All other symptoms had diminished in intensity. The fever still showed a tendency to rise. The daily dose of cholesterin was then diminished and the improvement progressed.

A limited bronchopneumonia was detected two days later, which had caused the high temperature, 39.5°C. This resolved rapidly, the tetanic symptoms constantly diminishing throughout its course. The last tetanic symptoms disappeared by the twenty-fourth day after the first symptoms had appeared. While in the hospital 19 days, he took hypodermically 17 Grams of cholesterin.

The authors, after study of the case, concluded that the cholesterin was curative, while checking the tetanus toxins continually forming at the focus of infection and preventing it from reaching the central nervous system. Meanwhile the organism was given time to rid itself of toxins already fixed and defend itself by its own resources against the bacilli of the tetanus infection. The defense with which cholesterin endows the organism is, therefore, merely an antitoxic one.

THE VARIABILITY OF CRUDE DRUGS

We have before us a pamphlet entitled Analytical Notes, 1908, from the Laboratories of Evans Sons, Lescher & Webb, Limited, London. In this is given the results of the analysis of some nine thousand samples of

crude drugs examined during that year. Some interesting data are afforded by an examination of this pamphlet.

Of four samples of aconite root assayed by Panchaud's process, the alkaloidal yield varied from 1.21 to 1.78 percent.

Extract of belladonna varied from one-tenth to ninety-six-hundredths percent of atropine. Belladonna leaves varied from .25 to .53 percent of alkaloid.

Of eighteen samples of belladonna root one yielded less than .3 percent of atropine; the others varied between this and .6 percent.

No sample of colchicum seeds reached the required percentage of .7 percent of colchicine, the highest recorded being .56 percent. Five percent of grape-sugar was found adhering to the surface of the seeds in two lots.

Heavy adulteration was found in ground gentian powder, wood fiber and fruit-stone powder being added. A great source of danger was found to lie in exhausted powders.

Hyoscyamus extract varied from .025 to .005 percent; one specimen being suspiciously high, yielding .15 percent of alkaloid.

The liquid extracts of ipecacuanha varied from more than 1.65 percent total alkaloids to 2.02 percent.

One specimen of jaborandi yielded only 0.03 percent of the alkaloid.

Jalap varied in resin-content from 7.4 to 11 percent.

Seventeen specimens of opium assayed between 9 and 13 percent of morphine.

These examples are sufficient to show why it is that our galenic preparations from these drugs, even although made in strict conformity with the U. S. P. requirements—the fluid extract having a full pound of the crude drug for a pint of the extract—still vary in quality even at the time they leave the manufacturer. When it is considered that through the evaporation of the water and the alcohol of the menstruum there is a tendency to increased strength in these preparations, while through the molecular disintegration of the active principles therein contained there is a constant deterioration of the strength, it is evident that the actual value of these preparations varies from day to day, and that even though they may have been carefully standardized at the time they were manufactured, the only way in which the physician can judge of their actual strength is by "trying them" on the patient.

So long as this miserable, ineffective method remains in vogue, just so long we shall find physicians pessimistic as to the control they are able to exert over the beginnings of acute disease by drug application. When the certain, uniform, unvarying active principles are applied, however, they will soon gather courage to intervene actively and powerfully in the beginnings of disease, and that physician who learns to utilize these will be found a firm believer in his own power of jugulating acute maladies.

It is easy therefore to see why the alkaloidist believes in the jugulation of acute disease, and why the devotee of the galenics does not. There is no mystery in this matter.

If you haint the nerve to try
Sneak away somewhere and die.

EARLY RISING AND SENILITY

The question sometimes is heard: "Why do men, as they grow older, tend to rise earlier in the morning? Is this an evidence of senility?"

One reason, it may be said in explanation, undoubtedly is that as men grow older they go to bed earlier. The child, especially the boy child, never goes to sleep until he must. His developing brain is taking in new impressions constantly, and he finds the process pleasurable. I have seen children holding their eyelids open at nightfall, in the endeavor to remain awake; and when asked why they did this, they would say, "I'm afraid I'll miss something." As youth advances to adolescence, and duties either relating to productive labor or to educational attainments occupy a certain number of the hours of the day, the youth, eager for the pleasures of life, looks to the evening for his amusements; and these amusements trench upon the hours of darkness, which should be the hours devoted to sleep as long as nature permits. The youth goes

home when no other place is open; he goes to bed when there is absolutely nothing else he can do.

As men grow older the burdens of life grow heavier, the hours that can be devoted to amusement grow fewer; and that whole chain of occupations whose ultimate object, whether comprehended by the individual or not, is the reproduction of the species, become less pressing; and as the physical and mental powers are taxed to the utmost in the struggle for existence, the need for the recuperation that is supplied only by slumber becomes more imperative.

Consequently men go to bed much earlier than they did at a younger age and the modicum of sleep is secured by an earlier hour in the morning than before. Our boy, aged sixteen, only goes to bed when there is absolutely nothing else that he can do, but he would sleep till noon if not disturbed. We were all the same at that age. Now we go to bed at eight or nine, and by four o'clock in the morning we have had all the sleep we ought to have, or need, and if we wake then, rise and set about the duties of the day, we are doing no violence to our physical constitution.

Then, also, the gradually acquired habit of taking the heaviest meal of the day in the evening, this being followed necessarily by a tendency to sleep, offers another reason for going to bed early, with the consequent early rising.

There is very probably some connection between this senile early rising and the cerebral vasomotor condition. The brain is anemic during sleep, but this anemia is maintained by the vascular contractility of the cerebral capillaries. If their tension is defective, the patient is prone to be somnolent during the day, while on his feet, but as soon as he lies down at night, wakefulness overtakes him and sleep refuses to come, because the relaxed cerebral vessels permit the heart to throw into them more blood than is consistent with slumber.

This is a condition we freqenetly see, and it is one of those opportunities which the physician welcomes who is accustomed to the nice application of active remedial agents; for he well knows that a physiologic dose of digitalin, or of any other vascular tensor, given on going to bed, would soon restore that healthy tone to the cerebral vessels which is productive of healthful slumber. The rude, boorish touch of the ignorant bungler who would administer morphine in a case of this kind, grates on the true physician's nerves. Vascular tension is an acitve quality, and it may possibly be that after it has been exerted to such a degree as to permit of the slumberous anemia of the patient for six, seven or eight hours, the irritability of that part of the nervous apparatus is exhausted. Relaxation then follows, and the sleep comes to an end as the veins become surcharged with blood.

A fourth reason may be found in the fact that as men grow older they are lighter sleepers, and the noises which begin when outside nature awakes, disturb their slumbers, whereas a few years previously they would have slept tranquilly through an earthquake shock or a Fourth-of-July celebration. Every physician knows that the footfalls of the messenger coming to summon him penetrate to his sensorium when still a block away, so that as the man comes up the steps the physician is out of bed and on his way to the speaking tube before the man has rung the doorbell.

There may possibly be other elements which enter into the causation of this phenomenon, but I believe that the foregoing are the most important.

The practical application of the data here submitted to the reader, however, is another matter. For instance, suppose a man has married a wife twenty years younger than himself! It is all very well for the elderly man to awake when the clock strikes four; but how about the wife who would naturally sleep two or three hours longer? *Hinc illæ lachrymæ.*

THE TOXIC ACTION OF ACONITINE

The uncertainty arising from the variability of aconitine-strength is obviated by employing always one form, from one manufacturer. There remains the variability

of the reaction manifested by the individual patient. This difficulty also is easily overcome by the fractional mode of administration. Give a single small-dose granule repeated at brief intervals, and stop when the desired action has been manifested. There is no possibility of harm resulting when this simple and easy method is employed. The only possibility of aconitine poisoning is when a toxic dose has been taken by accident or with criminal intent.

Toxic effects from aconitine are manifested by an abrupt fall of the pulse and bodily temperature, the latter sinking below normal, faintness bordering on collapse, formication in the extremities, a very intense intracranial neuralgia, respiratory troubles, rapid and irregular pulse, dilation of the pupils, prostration, convulsive movements. (Gubler.)

The general antidote to alkaloids is caffeine, or coffee, which latter also contains tannin. In a case of overdose of aconitine Burggraeve gave six granules of caffeine and a cup of black coffee, and in one hour the toxic symptoms had disappeared. Free diuresis followed. Burggraeve asserted that it was much easier to treat poisoning from an alkaloid than from a corresponding galenic, the effects of which are less certain and hence not so readily antidoted. Gubler advises strychnine and other convulsants as antidotes to aconitine, but Bruggraeve thought these might themselves prove perilous in the state of prostration in which the patient would be found. Caffeine offers no dangers of its own, and is especially applicable as it relieves the formication and the headache. This is why it is so useful in migraines, with cerebral hyperemia.

However, it must be remembered that in grave cases atropine exactly antagonizes the deadly action of aconitine and thus may save life that otherwise might be lost under less powerful antidotal medication. For aconitine primarily excites cardiac inhibition, while atropine sedates it. Aconitine induces cerebral anemia, atropine sends blood into the cerebral capillaries.

Toxic actions from aconitine are so rare that we have not seen a report of a case of poisoning for years. The sole danger lies in the use of carelessly tested products.

Adam was but human—this explains it all. He did not want the apple for the apple's sake, he wanted it only because it was forbidden. The mistake was in not forbidding the serpent; then he would have eaten the serpent. —Mark Twain

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THE ACADEMY OF MEDICINE

One of the most enjoyable features of the recent meeting of the American Academy of Medicine, at Chicago, was President Thwing's address. We reproduce a part of it here, not only by reason of the elevated sentiment uttered, but as an example of exquisite expression.

As Dr. Thwing speaks of Agassiz, it brings to the writer's mind an anecdote illustrative of that great scientist's methods. A pupil who came to work under him was handed a fish and told to describe it. The next day he told Agassiz the name of the fish, its classification, in fact all that the books could tell him about it. Agassiz asked, "What else?" The pupil took the fish back with him, and the next day reported a little more. Still Agassiz was dissatisfied; and so he kept his student at work on that fish, until at the end of a week he suddenly remarked that the fish was symmetrical! "Oh," said Agassiz, "that is what you should have started with." The observation of facts as they present themselves to the senses he rightly considered the foundation of science.

What else is the foundation of medical science, but the observations made in the book of nature?

This is exactly what we have been earnestly trying to urge upon the profession, the study of nature, as shown in the clinical manifestations of disease and the clinical application of remedies. Without undervaluing scientific knowledge—and surely no man could say that Agassiz undervalued it—there still remains the testimony to be rendered by observers.

President Thwing said:

The man of a liberal education is a scholar, or at least is scholarly; he is a thinker, or at least is

thoughtful; but he is also more than either the thinker or the scholar, in fact, more than both. This man, liberally educated, has entered the arcana of learning, yet he is not cumbered with or made heavy with the treasures which he bears forth. He is still intellectually alert. He has made himself a partner in humanity's life, but he has so shared that life as to create in himself a richer selfhood. He can judge truth and assess truth at a fair value. The man of liberal education has a mind deep in its fathomings, without obscurity, high and noble without visionariness, broad without thinness.

United with this mind of the man of liberal education is a heart of sympathy. Sympathy liberalizes, sets free the mind and the man. He comes to have a fellow feeling with the universe; his knowledge creates love. He may be a philosopher but he believes in the concrete. He is never vain; humility clothes him as a garment. He has powers of substitution, he is an altruist. He can see with others' eyes, hear with others' ears.

This man is also a man of appreciation of the beautiful. The ministry of art is a very real ministry to him. Through it he finds a larger soul—in it he meets his maxima. This mind has a mind to see and a heart to feel the grand, the beautiful. This liberally educated man is also a righteous man. Any lapse from moral goodness disintegrates, not only the conscience, but the whole manhood. Man is one. He that breaks any law finds the stain and the sting touching every part of his character. There is no ethical by-law: each part is of a permanent constitution. Wrong produces self-consciousness in the wrong-doer, and in self-consciousness neither the intellect nor heart is at its best.

The man of liberal education lives—to use the phrase of Professor Palmer—in fulness of life. Every faculty acts, every function is complete.

May we not say, in general, that each form of learning is good, and each useful? May we not say this without saying that each is equally good or equally useful? Is it not, in fact, unwise as well as unpsychological to say that it is equally good or equally useful for all people? For, does not the value of the content of a study depend in no small degree upon the student, upon the intellectual nature of the man to whom this scientific or ancient classical or modern linguistic tuition is given? To one man may it not be true that Greek is the most potent force in securing a liberal education, and to another mathematics, and to a third chemistry? To some youths Greek may be a bar sinister—to others it may be the lifting of the gates of an earthly paradise. Content has value, but we have been inclined to overvalue its worth.

I have also seen and heard and been the object of teaching which was correct, comprehensive, teaching with a sense of relations, challenging to thinking. Such teaching, in any subject, is a most precious power in creating the liberally educated man.

The scientist may be inclined to depreciate Latin, but I know of the teaching of Latin which represents observation, accurate and prolonged, inference exact and necessary and as interesting as any experiment in any laboratory. I have heard the great Agassiz lecture. The world has, on the whole, discarded Agassiz' biological theory, but those who were his pupils believe in the methods of his teaching, vital, interesting, quickening, enlarging, creative. The method of instruction has value in constituting a liberal education.

A contribution to the liberal education lies in what I may call atmospheres. An atmosphere is the spirit of a place and atmospheres are the influences which come forth from very many sources to touch the life of the individual.

I have seen worshippers on the Ganges lift holy hands in prayer to the rising sun and bathe their faces in the golden light. I believe it was good for them thus to do. The worship drew them out of themselves. It gave them affiliation with what they regarded as divine. In a liberal education there must be this same element of the infinite. If an Italian painter, three hundred years ago, wished to paint an interior, he always left a door open or an outlook at some window. It saved the beholder from narrowness and closeness. A liberal education must open the mind to the supreme.

In any contribution to a liberal education in this century the point of view to the student occupies a significant place. Is the student a student? Has there not been a decline in the intellectual interests of college men? Has the decline in intellectual interests been as great or not as great as the increase in athletic sports? Are not an increasing number of men coming to college for what was formerly regarded as its byproducts? Have we not changed the main purpose of the former time, the purpose of culture, of discipline, of efficiency for the byproduct of that earlier time—fellowship and acquaintance?

But as important as any one, some would say, all of these elements, is the teacher himself. Does not Goethe remark that one accomplishes most through personality? The force which creates a liberally educated man is a liberally educated man.

Therefore, the content of learning, the method of instruction, the beauty and force of intellectual atmospheres, religion, the studying of the student, the personality of the teacher, all and each are the forces and conditions which help to make the liberally educated man, and therefore help to constitute a liberal education in the twentieth century.

A quiet life often makes itself felt in better ways than one that the world sees and applauds; and some of the noblest are never known till they end, leaving a void in many hearts. —Louisa M. Alcott

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A GERMAN CRITICISM

Schultze, in *Hygiaenische Rundschau*, presents his observations while traveling in the United States. One of the main faults he finds with us is the lack of government control of hygienic matters. This he attributes to corruption and indifference, his views having been formed mainly on the articles of Samuel Hopkins Adams and other muck-rakers.

The lack of government control seems an unpardonable thing in European and especially German eyes, the principle on which the social systems are built in the Old World being that of central governmental control. America, as we are prone to forget lately, has developed upon the democratic principle, where every man is expected to have wits of his own and to use them for his own protection. Naturally, many things inherent in our system do seem wrong to European eyes.

It would be wise for those who are so industriously disseminating the view that we should approximate the European system, and substitute a central organization and paternalism for the old American ideal, to reflect on the ultimate consequences of such a change. If paternalism is such an unmixed blessing, it seems unfortunate that about a million a year of the European subjects should be so anxious to get away from those lands and come to America where they will have to take care of themselves.

This brings to mind an episode of family practice in the long ago. Visiting a negro family who had formerly been slaves, we found them living in a miserable, rotten, tumbledown wooden shanty in the slums of the city; the house unsanitary and in the last stages of decrepitude; the family in abject poverty, living from day to day, with no prospect ahead but starvation if the chance supply of work should fail and, should sickness or old age intervene, with no refuge ahead but the almshouse. Conversation revealed the fact that the heads of the family had been house-servants in the days of slavery, had been housed with the masters, well fed, well cared for in every respect, the best of physicians employed to attend them when they were sick and their old age generously provided for.

We inquired, after contrasting their former comfort and their present forlorn condition, whether they would not prefer to be back in slavery. To our surprise they answered unhesitatingly in the negative. Asked why, they at once made answer: "Marse Doctor, a body likes to be one's own boss!"

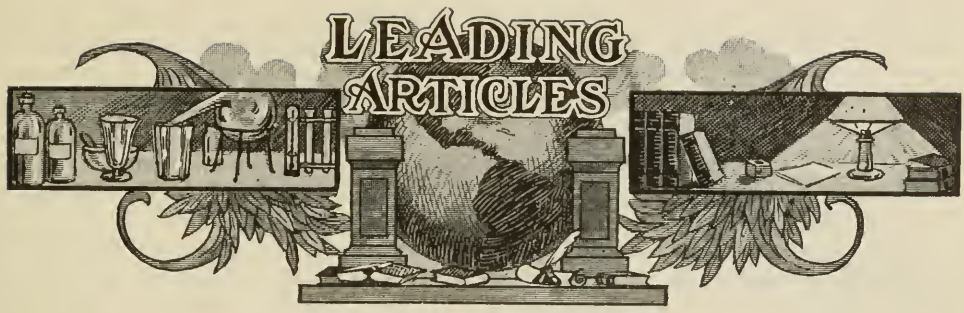
Some of us are primitive enough to be willing to do without many of the blessings conferred by parental government and remain our own bosses.

A SHOTGUN PRESCRIPTION

We are in receipt of another N. A. R. D. propaganda circular. This one recommends three compounds which it asks physicians to prescribe. One of these preparations contains the following ingredients: white pine, wild cherry, sassafras, spikenard, balm of Gilead, sanguinaria, chloroform, morphine. Now just let us look at the effects to be derived from their administration. White pine is a stimulant expectorant, increasing cough and drying up the secretions. Wild cherry is a sedative expectorant, soothing cough. Sassafras contains a volatile oil which acts similarly to white pine. The same is true of spikenard, and balm of Gilead. Sanguinaria is a stimulant expectorant, increasing cough and the sensibility of the respiratory mucous membrane. Morphine lessens cough, loosens expectoration, and lessens the sensibility of the mucous membrane. Chloroform exerts effects like those of morphine.

We have therefore in this combination, which the profession is recommended to prescribe, an assembly of curiously antagonistic remedies. Whether the combination would increase the cough or soothe it, lessen expectoration or increase it, congest or decongest the respiratory mucous membrane, contract or relax the blood-vessels of the inflamed area, would depend largely on the doses of each ingredient. Probably the stimulant effect would counteract those of the depressants, and we should have a stimulant *minus* the depressants as a net result of the administration of this combination.

It seems that these have been put together by somebody whose reading in the Pharmacopeia revealed the fact that most of the remedies contained in it are classified as "expectorants;" but beyond that fact the compiler evidently had not the chance or the desire to press his investigations.



A Better Knowledge of Therapeutics

A plea for more careful and more general study of this important medical branch, which is far too generally neglected by young physicians. Read before the International Medical Association of Mexico. Jan. 21. 1909

By R. D. ROBINSON, M. D., Torreon, Coah., Mexico

SINCE the advent of antisepsis and asepsis the medical profession has been drifting madly toward surgery, to the sad neglect of other branches of medical science, and no branch has suffered more seriously than therapeutics. To the latter our medical schools do not give the attention they should; surgery is more popular. Our young physicians of today, although the standard is higher than ever before, are noticeably deficient in therapeutics. The students are not at fault, neither are the faculties of our schools entirely at fault; the fault lies partly in the schools, but principally in the mad rush of the medical profession toward surgery. The schools yield to the pressure of popular demand. They are too lax in their requirements on this branch.

The effect on the student is irresistible; he inhales the contagion from the very atmosphere. The result is, he studies therapeutics badly, he thinks it dry and uninteresting. He gives just enough attention to it to escape the "green-room," and he leaves college with most of his therapeutics yet to learn and with but a small regard as to its importance.

When this student goes to the operating room, however, he is all attention. His anatomy is perfect, he regards anatomy as essential to surgery. His quick eye takes in the minutest detail with a critical knowledge of the technic. He notes the firm, confident movements of the operator as the incision is made, as his deft fingers bring the offending part into view. He notes the quick, sure decision of the veteran, but does not pause to consider how long it took this man to be able to pass quick judgment in such cases. He watches, in detail, the completion of the operation, even to the closing of the wound. He watches these things with an admiration akin to fascination. He has gotten all the details of the operation. But the preparation of the patient for the operation, or the careful watching during convalescence has never been impressed upon his mind by actual service. It does not occur to him that therapeutics has much to do with the case. It has never been forceably impressed on his mind that this eminent surgeon is a master therapist, and that without a thorough knowledge of therapeutics it would not have been possible for him to reach the pinnacle of fame on which he now stands.

The famous surgeon is his Cæsar and he follows him blindly. As soon as he receives his degree he rushes out and does not rest until he has made his first laparotomy. The

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medical profession is largely responsible for this condition of affairs. When a student or young doctor calls on a practician, the older man almost invariably leads the conversation entirely on surgical lines; he tells the young man vivid and alluring stories of surgical operations he has made. He may take him to see an operation, but never to see a fever patient nor a patient recovering from an operation or one battling with some post-operative complication. He stirs and heats up his young blood with surgical ambition until we cannot blame him for thinking that surgical technic is all that is worthy of serious attention.

Some Things the Young Physician Should Consider

I want to ask the young aspirant to stop a moment in his mad rush and consider a few pertinent points. He has a bright and useful life ahead of him, if he does not spoil it in the making.

He should have the courage to say that he has not yet had sufficient experience to attempt an operation of this character and be content to watch the older men operate for a few years, for as yet he has never gone into the preparation-room and actually prepared a patient for an operation; nor did he ever visit the convalescent-room and daily watched the patient's recovery; nor was he ever taught by observation how to meet the complications and sequelæ.

A few, who have had actual hospital service or had unusual advantages, have had opportunities to observe these things, but it is a fact that a large majority of our graduates have never seen a patient prepared for an operation, nor have they ever had the opportunity of actually watching their recovery.

It is also a fact that many of these young operators must depend on the anesthetist to warn them of the condition of their patient during the operation.

Far be it from me to throw a cold compress over the hot ambition of these young surgeons. I admire them; they are made of good stuff, and lest someone should take me wrongly, I will say: I believe the medical graduates of today are the most promising lot of young fellows in the history of medicine, but I would have them put their ambition on ice for a year or two; it will keep cool and fresh, so that when they do make their first major operation they do it right and will be a credit to them and the schools which sent them out. Nor am I speaking disparagingly of surgery: my plea is not for a lesser knowledge of surgery but for a greater knowledge of therapeutics. If the young doctor has not acquired this knowledge in school, he must get it in study, observation and by contact with experienced physicians.

And I want to drop a remark here to the older men: Treat this young fellow kindly; he is a good fellow and will make a good friend, and you will probably get as much from his newer ideas as he will from your experience.

A Definition of the Word "Therapeutics"

The definition of "therapeutics," as given by Dungleson, is: "To wait upon; to alleviate; to attend upon the sick—that part of medicine the object of which is the treatment of disease."

Billings says: "That branch of medical science which treats of the application of remedies to the cure or alleviation of disease." I would shorten this to read: Any honest endeavor to cure or alleviate disease.

There are three distinct classes of therapeutics, which might be defined as follows: Surgical, Medical, Psychological. Under surgical therapeutics I should include the preparation of the patient before operation; the preparation of instruments, dressings and operating room; the preparation of the operator and attendants, and the care of the patient during and after operation.

Under medical therapeutics I should include the internal and external administration of medicines, including antitoxins, massage, hydrotherapy, electrotherapy, hygiene, diet, heat, cold, fresh air and sunshine.

Under psychological therapeutics I should include any effort on the part of the physician to influence or control the mind of the patient tending to alleviate or cure disease. Many of our patients are the victims of self-

deception, and we are often called upon to undeceive them.

I often think Dr. Benedict of Buffalo was right when he said: "Many of these patients are unaware of their own naughtiness and need a good whaling or at least a good tongue-lashing." But we, in our practice, must supplant this very rational therapeutic measure with something less violent; psychotherapy is our recourse, combined or not with placebos or with well-directed medicines, where indications for them exist: good cheer, mental suggestion, hypnotic suggestion and personality of the physician. It is true, mental therapeutics has suffered much from charlatans and faddists, but it has a legitimate field and this field is far wider than is generally believed.

Surgical Advance Traced to Therapeutic Knowledge

The extraordinary advance in surgery within the last few years is traceable, in a very large measure, to therapeutics. About sixty years ago surgery was revolutionized by the introduction of ether and chloroform. It was again revolutionized not much more than a quarter of a century ago by the introduction of antiseptics, while a few years later the intense importance of asepsis made possible that which could not have been undertaken in any other epoch of surgery. "The discovery of new instruments might well be credited to therapeutics." (Hare.) The surgeon would almost be helpless without this highly important branch of medical science.

Surgeons have claimed that therapeutics has not kept pace with surgery and pathology. This is due to ignorance of the advances made in this branch of medicine. We will concede that the surgeon has made wonderful progress, but can he show any advance that will equal antitoxin in diphtheria, thyroid gland in myxedema, chloroform for anesthesia, bichloride or formalin as a germicide, cocaine and antipyrin for the relief of pain, and picric acid for burns. They may not believe in calomel and castor oil, but they must believe in chloroform and cocaine.

The medical students' Utopian dream is that he may become a renowned surgeon. Why do so many fail? True, many are not naturally adapted; many others do not have the opportunity on account of their surroundings, but many—too many—fail because of their lack of knowledge of the essentials of therapeutics.

Why So Many Bright Men Fail

How often we see a wholesome, promising young surgeon, carefully schooled in technic, skilful, rapid and sure, and we think this fellow will make his mark. But after a brilliant operation he sees his patient does not do well; he sees that complications have set in to rob him of his glory. He has not had sufficient experience to see this before it is too late. He cannot see the reason and he becomes discouraged, fearful, loses condence in himself and his retreat to mediocraty is pathetic. His downfall is due to his lack of knowledge of therapeutics; he does not realize that therapeutics is a branch of medicine that must be resorted to by the surgeon, and that the skilful surgeon who fails to treat his surgical cases medicinally with equal skill is worse than he who, as one author puts it, "though bungling in his surgery yet uses drugs intelligently after his slashing is finished." And I would add, before his slashing has begun also. One must be a competent therapist before he can hope to be a successful surgeon.

Twenty years ago no less a surgeon than the late Dr. Nicholas Senn said in my presence that three-fourths of his studies were devoted to therapeutics and he regarded it the key to medical and surgical success, and that the physician's personality and the impression he makes upon his patient has much to do with the results obtained.

Therapeutics Is Not a Failure

There is a certain class of physicians who claim that medical therapeutics is useless. Of this class I would only say, they have used their drugs ignorantly or wrongly, and they should take up the study of medical therapeutics in earnest or retire from the legitimate profession and join the ranks of the pseudoscientists. It is too true, the over-

dosing of the past century made possible the founding of homeopathy and other faith-cure institutions.

Thus the reform, which God knows was badly needed, was carried to the other extreme, and therapeutic nihilism prevaded deeply into the ranks of the legitimate profession.

But to homeopathy must be given the credit of bringing the "big dosers" to a realization that they were in some way in the wrong. They noticed their patients drifting from their nauseous dosage to the sweetened water and sugar pills of the homeopath, and they seemed to do as well on homeopathic blank cartridges as they did on allopathic grape and cannister. The doctor's fame was waning; the lime-light was shifting; he must discover the cause of this or be thrown off the proud pedestal he had occupied so long and yield his place to the despised "little-pill-man." Then he discovered there was a world of therapeutical merit not wrapped up in big pills and nauseous powders; he began the study of therapeutics in earnest, and to his credit; in less than a generation he had worked out his own redemption, and instead of the big "shotgun" prescriptions, in the hope that some one of the ingredients might hit the spot, he has changed to the "small-caliber, single-shot rifle prescription."

Make the diagnosis first. This is not always easy, nor can it always be done at once. Many times this may be delayed several hours or as many days. In the meantime the physician should give no medicine whatever, unless it be the use of a temporary remedy for the relief of certain severe symptoms which indicate immediate danger or to overcome symptoms which mask the disease and make a diagnosis impossible; a state of shock, coma or syncope or the heart's action may call for stimulants, or the suffering of excruciating pain may demand a hypodermic injection of morphine before the examination can proceed. But once the diagnosis is made, the drug should be selected with the care of an Indian chief choosing an arrow for a deadly shot, and with the same unerring judgment.

The proper dose of a remedy is as important as the selection of the remedy itself. The therapist has ample room for skill in choosing his dosage and watching its effect. The effect of a drug may be lost or changed by carelessness or bad judgment in dosage.

The "Black Art" and Mental Healing

Magic, sorcery, necromancy, known as the "black art," was practised by the ancients, and throughout the ages even to the present day, for the cure of disease. These might not have been so bad had they always been employed to a good purpose. Still out of all this came some good. From the "black art" came, eventually, mesmerism and hypnotism. These forces are capable of accomplishing some good, especially in functional neuroses and the drug-habit. No one doubts the possibilities of hypnotism in the hands of the imperial Charcot, the father of modern hypnotism, and he has left many able students who are making honest endeavors to develop this dangerous but useful art, and a higher plane of usefulness is predicted for it than is believed possible at the present day.

Mental suggestion, under which might be classed the fads of faith-healing, Christian science, homeopathy and osteopathy, are allied therapeutic agents with more or less merit. The one last named, i. e., osteopathy, has the advantage of combining mental suggestion with a useful massage. These are some of the fads of healing which have sprung into prominence in the past few years, and what is good of them should be classed under the head of mental suggestion.

The success of these fads depends on the fact that "nature often produces her most rapid cures when left alone," and out of every ten cases of illness perhaps eight will recover of their own accord, without treatment; one may die regardless of all that can be done by any means, the tenth may be amenable to skilful treatment. Thus these faddists may profess to cure eight out of ten cases of illness brought to them and apparently make their boast good; the other two patients will either die or seek the aid of the physician or surgeon.

It is the habit of the medical profession to scoff at these healing fads, but it must be acknowledged by the observant physician that there are many cases of illness, especially functional neuroses, which are more amenable to this kind of therapeutics than that of drugs. Now, many patients have been cured by a placebo and a little well-directed encouragement and wholesome advice.

It is true that in most such cases that "will-o-the wisp," the mind, is responsible. But it is a malady just the same, and the practician who fails to recognize the condition, and who fails to apply the therapeutic effect of a strong, healthy mind over that of the weak, falls that much short of what he should be and loses one of his best assets. What I wish to convey is that therapeutics is not confined to drugs.

A Non-Drug Form of Therapy

These faddists are practising a form of therapeutics the nature of which they do not understand, and the medical profession has been too prejudiced to take the matter up and develop it on proper lines. Some forty years ago Dr. S. Weir Mitchell instituted the rest-cure, the virtue of which is now believed to lie almost entirely in the effect on the patient's mind.

The physician's personality is a therapeutic factor. The impression he makes on his patient may determine his usefulness in the case. If the patient has no confidence in the physician, his dosing will be of little avail. On the other hand, if he succeeds in gaining the complete confidence of his patient, he has the cure half made before leaving the sick-room. This may be termed mental suggestion, or the effect of mind over matter or the effect of a strong, healthy mind over a weaker one, or you may call it miracle, faith-cure, Christian science or homeopathy. Name it what you will, we all have seen its effects and we know it is a power which none of us is willing to part with. We need more of it. We should study it and watch its effect on our patients as carefully as we do the action of drugs.

Thus the physician should be a judge of human nature, a constant student, in fact. His ability to determine the character of his patient in the few moments' preliminary talk may mean success or failure. It is time our medical colleges should recognize this force as a therapeutic agent and teach it on proper lines. Our college has already established a course in this branch.

In this branch of therapeutics incompatibilities and idiosyncrasies must be carefully looked for and avoided, if possible. Good-cheer is a remedy almost universally tolerated in large doses, but even this may be given in over-doses and have a corresponding secondary, or depressing, effect; especially might this be looked for in ascetics.

Suggestion and Hypnotism

Suggestion under hypnotism is an extreme psychotherapeutic measure. Under hypnotic influence the mind is particularly receptive, but our best authorities tell us that hypnotism should be practised solely by a physician, and then only exceptionally; besides, only a very few physicians have developed the power to produce this state. Therefore we must practise suggestion without hypnotism, but before we can do this we must have the confidence of our patients, to render them susceptible.

Hypnotism is not without its dangers. I have seen patients who had acquired the hypnotic habit and required more frequent and larger doses as time passed; much as the morphine habitué. I have also seen patients who had been cured by some faith-cure institution have repeated and more frequent attacks of the old malady, each time being compelled to return to the institution to be cured once again.

The physician must be cautious in his use of psychotherapy and, so far as possible, use it in conjunction with other means of treatment, lest the patient might think him a mystic or charlatan and thus destroy his chances to be of service to the patient. Again, not infrequently, we see a physician who has become overzealous in his practice of psychotherapy overlook a grave, organic disease. Psychotherapy, like drug-therapy, should be practised with skill and judgment

and in "combination with other methods generally recognized as useful."

The patient should be made to feel or think that every effort is being made to hasten recovery. Many times he wants "an outward and visible sign" that his case is receiving proper attention, as aptly put by Prof. Hare: "It certainly requires much faith for a patient to take a dose of digitalis once in eight hours and still feel that everything is being done to overcome the dyspnea and other subjective symptoms which may be annoying him every moment. In such a case remedial measures other than the drug should be undertaken to insure the best results from the drug itself"—i. e., such as rest in bed, massage, hydrotherapy, attention to diet, etc. These relative measures not only insure the best results from the drug, but they serve to impress the patient and put his mind at ease.

No form of therapeutics, whether it be drug-action or mind-action, whether it be called allopathy, osteopathy or faith-cure, should be too small to attract the attention of the physician, and he who becomes most proficient in all these branches of therapeutics will reap the larger reward.

The master therapist is the refined gentry of medical learning.

Sociologic Epigrams

These epigrams are reprinted from the Sunday Times Magazine of Los Angeles, California, the editor of which, Mr. Harry Brook, is publishing weekly extracts from Dr. Lydston's book, "Diseases of Society"

By G. FRANK LYDSTON, M. D., Chicago, Illinois
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THE normal sexual instinct of woman is primarily unselfish; that of man is supremely selfish.

A single indiscretion does not make a prostitute, any more than a single bottle makes an inebriate.

The lie of platonic love is a reef on which many credulous dupes have been wrecked.

A photograph of the original snake, were such procurable, would quite likely bear a strong likeness to Adam himself.

Underlying much of man's immorality is the fact that nature designed him as a polygamous animal.

The persistence of sensual desire in woman after the menopause is artificial, and due to long cultivation by response to man's desires in monogamous relations.

The wild-oats theory was probably invented by a fake social philosopher who had sins of his own to apologize for and no diseases acquired by early indiscretions to modify his opinions.

The instinctive tendency of the male toward polygamy is one of the conditions against which normal men who would be moral have to fight.

In most cases of marital infelicity it is safe to say that the husband is at fault. There is a very cogent reason for this. He has usually in mind a physical standard based upon previous experiences. While the glamour of early life lasts, he is satisfied with the situation. The inexperience of the wife is a decided novelty. When satiety arrives, as it usually does sooner or later, he begins to recall memories of past experiences, in the light of which the physical charms of the wife begin to pale.

Being born is often a disaster, social or individual, or both; never having been born may be a blessing, but it can never be a disaster to the individual.

If more attention were paid to quality both of parentage and children and less fretting over the possible disasters to the

nation incidental to small numbers of children, it would be vastly better for the coming race.

Love at first sight often leads to divorce at second sight.

When matrimony is shorn of its theologic bias and resolved into its true status as the sheet-anchor of society, eugenics may have its day.

Mere moral and religious training, while well enough so far as they go, are often ineffective as repressants of female immorality, simply because young girls observe that the standard of virtue and morality is largely a matter of opinion.

Despite the beauty of his verse, the world might have struggled on without the neuropathic Lord Byron and his peculiar moral bent, which inculcated the doctrine of hating your neighbor and loving your neighbor's wife.

Genius is mysterious only to the extent that mind is mysterious. If the mind has a physical basis, as is now generally believed, a physical basis must also be assigned to genius.

The typic criminal and the genius are alike in that they are born, not made.

The genius, solitary and alone in the desert from birth, would build no locomotives, paint no grand pictures, write no great poems nor construct systems of philosophy. The genius, therefore, shows his genius only in response to his environment.

Whatever the state of the mind may be during the interim, it is doubtful if any poetry worthy of lasting fame, or any romance of high class, was ever written while the author was in a normal state of brain. There must, of necessity, exist a loss of balance in the direction of the emotional centers at the time of such production.

Sexuality in the genius presents irritability, rather than strength.

The morality of a criminal act is never questioned by the true criminal. His moral centers either have never developed or have ceased to functionate, leaving him in a condition of moral atrophy—or better, perhaps, moral anesthesia.

That society will eventually, for its own protection, adopt some method of regulation and restriction of matrimony I believe to be inevitable.

The most woeful feature of all educational institutions, both public and private, is the lack of discrimination of individual cases and of selective instruction.

Capital punishment is a system from which there is no appeal. No court is wise enough to correct its own errors, once its victim is executed. There should be no system of punishment the mistakes of which cannot be rectified.

Criminals by heredity are usually hopeless—they are rarely caught young enough. Criminals who have committed one or at most a few crimes under the stress of impulse, necessity or temptation and example, yet have no criminal ancestry, if they have not been brought up in the slums and have a fair physique, are always reformable.

Society's first duty is to itself. Anything done for the criminal that does not redound to the advantage of society is sentimental and economic waste.

The criminal, as such, has no rights—he has forfeited them to society. When he is reformed or cured, he has the same rights as any other citizen.

Society owes every man a chance to make an honest living. The criminal is entitled to this. Honest men are entitled to the same chance. If he does not get this chance the previously honest man may be driven to crime. Man was and is a predatory animal. If he can't get the wherewithal to sustain life honestly, he is going to get it the best way he can.

The honest tramp or hobo often gives society more than its due. He might prey upon his kind more actively. Social parasites and messmates might become social tigers and wolves.

The money which we will spend at Panama and the money we have foolishly wasted in the Philippines would better have been spent to improve our rivers and harbors and in building good roads throughout the land. This would have given employment to many criminals and potential criminals

The cost of a battleship could be expended so as to bring much larger returns.

And yet, as we are now a militant nation, we must have battleships. Japan is now a sort of Jack-the-Giant-Killer, and the giants must watch out.

The criminal is often a criminal because he has never tasted the sweets of honest labor. Suppose we give him a chance to do so.

Instead of teaching him to cut a shoe-sole by machinery, let us teach him to make a shoe—at least to "cobble."

Instead of farming out his labor at a profit, let him have all that remains over and above the cost of his keep. Make him earn his living, but give him the surplus if there is any.

One of the best preventives of crime would be to make every criminal reimburse by labor the State for not only the cost of his keep, but also the cost of his trial and conviction.

Why should normal people be taxed for the legal machinery of crime and the support of the criminal?

But, you say, the laboring man would object to convict-labor competition. Sure, but the laboring man hasn't any brains—he'd be running the country if he did have.

He is willing to let us pay for the education of his children and to protect his home against fire and his family against the criminal, but he doesn't want convict-labor competition.

We pay the tax, and should be protected. Restrict convict labor to state or municipal employment, make the convict self-supporting, make him reimburse the State and the man he robs, and if there's anything left let the convict have it. The possession of a few honest dollars would give him a new thrill—and we all like new thrills.

The chief reason a convict is a convict is that he has never taken advantage of his prerogative of earning an honest living. If he has not had the chance, give it to him. If he will not take it, treat him as you would an unruly child who will not take his medicine. Spoon it into him!

I have sometimes thought that if a thief were compelled to work out the amount of a given depredation, crime would be materially lessened. This would put the "high-finance" robber just where he belongs. A few million-dollar thieves working out their peculations at a dollar or two *per diem* would do more to bring about the millennium than all the preaching that ever was preached. We should then hear no more of the difference in the legal status of the man who steals a loaf of bread, or the million-dollar defaulter—the man who steals to live and the man who lives to steal.

Give the fellow who steals the loaf of bread five cents' worth of work to do, and give the other fellow a free pass on the punitive century unlimited.

Society's first duty to itself is to do away with its burden of degeneracy. There is no room for the sot, the criminal or the idler. They should either be compelled to make good or chloroformed.

We foot the bills and ought to awaken to a sense of self-preservation.

The first act in the life of a criminal is the same as the first act in the life of everybody else. He gets born. Society's first duty to him—if it has a duty—is to prevent his being born. Marriage restrictions and regulation and criminal sterilization will accomplish much.

Every child is a potential criminal—the degenerate child especially. The lives of all children should be supervised by the State. Child labor should be replaced by child education, by gymnasia, play-grounds and manual training.

Expensive? Sure it is expensive. But prevention is cheaper than cure. Schools, free baths, gymnasia and child supervision cost less in the long run than prisons, asylums, scaffolds, and legal machinery.

When the criminal has left the prison walls, what shall we do with him? Society's duty to itself is to watch over him and see that he leads an honest, industrious life. Further, society should give him an opportunity to do so. *The parole workshop should succeed the prison workshop.*

Do I believe in the parole system? Yes, as much as I believe in anything logical which is yet to be fully tried in the balance.

The parole system is new, it is liable to abuses, it is liable to misinterpretation, and unintelligent or even evil applications, but this is no argument against its intrinsic worth. How many crimes have been committed in *thy* name, O Christianity!

But let us beware of getting the cart before the horse. The parole system should be regarded as social utilitarianism, not as a mawkishly sentimental institution for the sole benefit of criminals.

Again I say, social self-defense should be the axis of penology.

A penal colony in the Philippines or some such place wouldn't be a bad idea. When the criminal has shown that he cannot be made a decent citizen, eliminate him. This is done with the leper, who is merely a victim of dire misfortune, why not with the criminal?

Strange to say, in a new environment he may become decent. Note the history of Australia, Tasmania and New Zealand.

Really, those people over yonder ought to be pretty decent. Most of their ancestors were sent over there by excellent judges.

Galen Versus Modernism

Why the methods and remedies advocated by Galen, eighteen hundred years ago, should be replaced by ideas and practice which are representative of the progressive spirit of the age—active-principle therapy!

By GEORGE L. SERVOSS, M. D., Fairview, Nevada

IN his day Galen undoubtedly was a leader and probably a man much ahead of his brethren, but that was some years ago, and marvelous progress has been made in all lines since his demise, which occurred late in the second century, or something like seventeen hundred years ago. The greatest progress in all lines, whether in commercial pursuits or professional, has been made within the past two centuries, and in medicine it has been made during the past four decades. Many doctors still cling to the teachings of Galen in so far as therapeutics is concerned and cannot be impressed with anything modern in the treatment of the sick.

The men in charge of the Pharmacopeia have, within the past few years, improved upon the methods of Galen by "standardizing" certain preparations, or in other words, making it incumbent upon the manufacturer to have his finished product contain definite percentages of the active principle of the crude drug. This has been a step forward toward modern ideas, but has not gone far enough, for in spite of the fact that a specified active-principle percentage is required, these men have not required that all other inert bodies be eliminated. Some manufacturers have gone a step farther by making other unofficial preparations of standard strength, according to their own ideas.

The Faults of Standardization

Standardization of a fluid preparation is all right, but fault may be found with such solutions, in that they do not remain standard. We may take fluid extract of nux vomica as an example. The U. S. P. says that the finished product must contain a certain percentage of strychnine. It does contain this when it leaves the manufacturer; but supposing a bottle of this product should happen to go to the arid regions of the Great American Desert, where evaporation goes on with great briskness, what happens? No matter how well a container is corked, there is bound to be more or less evaporation and the strychnine percentage is raised as this loss of fluid goes on. What is true of one is true of every other fluid preparation. In certain extracts where glycerin is used as a menstruum and the product

goes to a moist climate the reverse is the case, as glycerin, being hygroscopic, absorbs water from the atmosphere and thus the active-principle percentage is lowered.

If it is the active principle that is wanted in a mixture, why retain all the inert substances present in the crude drug, when they may be eliminated? Why not separate the active principle, and if a fluid preparation is wanted, make a solution? In that way the tannin, coloring matter, dirt and all other extraneous matter would be eliminated, and the doctor would know just what he was administering and would also know that there could not possibly be any incompatibility, owing to the presence of something other than the active principle desired.

If the Active Principle Is Wanted, Why Not Give It?

But why, if it is the active principle that is wanted, give a fluid, when it is a well-known fact that most of the active principles have been obtained in their pure state and may be administered as such and in known quantities, without resort to liquid preparations which may or may not be standard? It would seem to any clear thinker that it is folly to administer something which is wholly without worth in so far as remedial efficiency is concerned. It is not modern to go on following in the footsteps of Galen who, although a great man in his day, did not understand things modern and did not know just what portion of a crude drug was effective and what was not. He probably knew that opium produced sleep, but did not know just what it was in the substance that had that action. He was undoubtedly the peer of his faculty in the year 170, while in Rome; but were he placed among the physicians of A. D. 1909, he would be woefully behind the times as a teacher of therapeutics.

There are many physicians today who still follow in the footsteps of that old teacher and who cannot be convinced that active-principle therapy is worth even the least attention. They say that they administer standard preparations but will not admit that it is the active principle in their standard solutions which give the results. Many of them will exhibit quinine, morphine, strychnine and atropine in their simple forms, but when advised to use other products of this sort they will say that they are worthless. As a rule, they can advance no argument worthy of attention, holding fast to their ideas even when shown that absolute results have been obtained by others. They say that some folks are "making a lot of stuff" out of this sort and are pushing it, but that the products have never been satisfactory to them. The majority of such men would follow in the footsteps of Galen and do as he did rather than give the matter a little study and become modern in their methods.

It takes some time and trouble and a good deal of study to step from Galen to modernism in medicine, but once accomplished, definite results are obtained, and the physician who uses active principles in their simple forms knows just what he is doing and what results he may depend upon. He knows that when he administers a milligram of aconitine he is giving neither more nor less than that amount. On the other hand, the man who gives tincture of aconite does not know the absolute active-principle percentage of his product and is in the dark as to absolute results. And this is true of every standardized product. While the physician who is using them is bordering on modernism, he has not quite reached that goal, and will not until he begins using the simple active principles. The man who uses the products devised by Galen is afraid to "give to effect," for fear of disaster. He is working with an unknown quantity, and that is neither modern nor scientific.

The introduction of active principles has brought about a scientific era in medicine and advanced it to an art instead of an educated empiricism, as has been the case from the time of Galen.

If the men who had charge of the revisions of the U. S. P. would recognize the fact that active principles have come, and come to stay, and that they have a legitimate place in the medical world, and if they would

give them the prominence they deserve, it would tend toward real scientific medication.

Where the Manufacturers Fail

The makers of galenicals do not like to admit that they are behind the times, but a careful perusal of the pages of most of their price-lists will result in the finding of most of the active principles listed. These are not pushed, for various reasons, the main one being that they cannot be masked under the proprietary head and gigantic prices obtained for them. There is not a manufacturing pharmacist who does not use active principles in making up some of his formulas, and it is to be noticed that a good many, tablets in particular, are said to "represent" certain proportions of this or that fluid extract or this or that crude drug, or this or that tincture. The size of the tablet, in most cases, would not allow the use of the quantity "represented," so the maker uses active principles.

Why does he not say plainly that he uses so and so much cascarin instead of saying that the product "represents" so much cascara sagrada, in one form or another? No one objects to cascarin, but the manufacturer, in pandering to the galenical physician, dodges around the bush. It is a pleasant thing to note that a large number of physicians are joining the ranks of active-principle therapy, and the day is coming when Galen will be only a memory and things therapeutic will be modern.

Limitations of the Emmanuel Movement

A description of some of the methods of mentally impressing and "curing" the sick which have been practised in the past, compared with the most modern phase of psychologic therapeutics

By JAMES G. KIERNAN, M. D., Chicago, Illinois

II.

ANOTHER disdain of diagnosis appears in Wisconsin "cures" of appendicitis by Chicago Emmanuelists. Appendicitis often exists, as C. K. Mills has said, only in the head of the surgical fakir hungry for an operation fee; of the adolescent nosophobiac and the hysteric; of the Eddyists dining on pickles, doughnuts and ice-cream; of the instability desirous of fashionable notoriety. The last mimics the plutocrat as to appendicitis like the slavish courtier of Louis XIV (the Bourbon *poseur* "who took his very emetics in state and vomited majestically in presence of his courtiers) mimicked Louis' anal fissure. When Louis XIV[1] had anal fissure great court ladies whined because not even surgical obsequiousness could detect it in them. Until such prodigious elements of error are eliminated by analytic diagnoses the Emmanuel movement must rank with that of Greatrakes of Loutherbouerg of Lourdes, of Eddyism, Dowieism, etc.

Scientific Contempt for Etiology

Contempt for science also appears in etiology. The leading Chicago Emmanuelist, ignoring the results of ethnologists and demographic nosologists, states that nervous diseases are unknown to primitive races and are the product of civilization. This glittering platitudinous semi-mendacity which flatulently minded sociologists so often prate is a misoneistic product of the myth of the "golden age." In the sense that nervous diseases do not exist, no diseases exist with primitive man. All are products of spirits which play such a part in the terror that has dominated man since he unsteadily committed the original sin of getting up on his hind legs in whose use he even yet requires training. The walker

[1]Cabanis: "Secret Cabinet of History."

is made, not born. This sin gave him hemorrhoids, varicose veins, rupture and pelvic disorders, likewise producing a cerebral uncertainty that created a fetichism which endowed everything with a spiritual nature like his own as seen through his dreams.

The Primitive Man Lacking in the Critical Sense

Primitive man cannot avoid considering things as endowed with the inner properties discerned in himself, since he has no critical sense. For him every object lives, wills, is kindly or unkindly disposed. Thus everything inspires him with suspicion, so that he scarce ventures to touch even the plant which affords him nourishment without propitiatory rites.

As man can ascribe to objects such notions and passions only as he has himself, primitive man attributes to his fetich his own desires, magnified to the highest degree: his hunger, his thirst, his love, his hate, his caprice, his rage. The object, like the child's doll, continues to be in the primitive mind that which it is in external form. The stone remains a stone, the river a river. Water itself in its proper form and with its native properties is invested with anthropopathic characteristics.

The same apprehension of things occurs in children. The little girl who, in perfect seriousness, regards the doll as a playmate, who strips and clothes it, feeds and chastises it, puts it to bed and hushes it to sleep, calls it by a personal name, and so on, never imagines that all her care is bestowed on a lifeless thing. For her the doll is possessed of a human life bestowed upon it by herself.

The fetichic conceptions here described establish a mysterious "religious" state which necessitates restriction and safeguards or taboos. Men and women at marriage, women during menstruation, pregnancy and childbirth, infants, boys and girls at puberty, not to mention other critical conditions, are in this mysterious "religious" state. They are dangerous and are themselves in danger.

From the anthropopathic conception of primitive man arises his belief in the omnipresence of "spirits," with like caprices and passions as himself. Supernatural personification does not cover all of primitive spiritualism.[2] These dangers are still undifferentiated and combined in one genus, in which there is no distinction between natural and supernatural, real and ideal, nor between persons and other existences. These "spirits" are really material, though unseen; many are simply "influences"—states of matter—impersonal forces. The atmosphere is thus charged with "bacteria" of invisible mischief or with "spiritual electricity." Man needs to walk warily, since at any moment he may be endangered by this hyloidealistic force.

These "influences" produce states of "religious" peril. This primitive conception of danger leads to the precautions of "religious" type characteristic of early ritual. It appears in two main forms: the predication of evil and the imposition of taboo. Primitive man, indeed mankind in general, are very secretive concerning their functional life.

Evil "spirits" are not always clearly distinguished from transmissible properties of matter. When President McCosh ascribed the typhoid epidemic at Princeton University, a quarter of a century ago, to a "mysterious dispensation of Providence," he adopted this conception of primitive man.

General ideas concerning human relations are the medium through which all taboo works. These conceptions center upon contact. Ideas of contact are at the root of the conceptions of human relations at any stage of culture. Contact is the one universal test, as it is the most elementary form, of mutual relations. Desire or willingness for physical contact is an animal emotion more or less subconscious, characteristic of similarity, harmony, friendship or love. Avoidance of contact, whether consciously or subconsciously presented, is no less the universal characteristic of human relation where similarity, harmony, friendship or love is absent. Primitive

[2]Crowley: "Mystic Rose."

physics no less than modern recognizes that contact is a modified form of a blow. Avoidance of contact is the most conspicuous phenomenon of taboo when its dangerous character is dominant.

The Transmission of Properties

This material transmissibility renders contact of such importance. Transmission of properties, whether of nature, man or "spirits," is behind avoidance or desire for contact. Every part of the body, according to primitive science, is impregnated by man's properties. The parts especially so considered are those held to have special connection with life and soul, chiefly important organs and centers.

Spirits struggling with each other for reincarnation are, according to primitive man, responsible for any unusual event, from the birth of children to warts.

For instance, a certain Australian tribe has (according to Frazer)[3] no notion that mankind is propagated by union of sexes. Indeed, when the idea is suggested to its members they steadfastly reject it. Their theory of the continuation of the species is that in certain far-off times (to which they give the name of Alcheringa) their ancestors roamed about in bands, each consisting of members of the same totem group. Where they died their spirits went into spiritual storehouses in the earth, the external mark of which was a stone or tree. Such spots are scattered all over the country. Ancestral spirits who haunt them are ever waiting for a favorable opportunity to be born again into the world. When one of them sees his chance he pounces out on a passing girl or woman and enters into her. Then she conceives, and in due time gives birth to a child, who is firmly believed to be a reincarnation of the spirit that darted into the mother from the rock or tree. It matters not whether a woman be young or old, matron or maid, all are alike liable to be thus impregnated by the spirit.

It has been shrewdly observed by these natives that the spirits on the whole exhibit a preference for such as are young and fair. Accordingly, when a plump damsel who shrinks from the burden of maternity is obliged to pass one of the spots where the disembodied spirits are supposed to lurk, she disguises herself as a withered old hag and hobbles bent up double, leaning on a stick, wrinkling her smooth young face, and mumbling in a cracked, wheezy voice, "Don't come to me; I am an old woman." In the opinion of these savages every conception therefore is an "immaculate" one, brought about by the entrance into the mother of a spirit, apart from any contact with one of the other sex.

Another phase of the same belief is found in Annam, where the spirits of children stillborn or dying in infancy are held in great fear. These spirits, called *con ranh* or *con lon* (*lon*, "to enter into life"), are ever seeking to incorporate themselves in the bodies of others, though after so doing they are incapable of life. Moreover, their names are not mentioned in the presence of women, for it is feared that they might take to these; so a newly married woman is in like manner afraid to take anything from, or to wear any of the clothing of, a woman who has had such a child.

Pregnancy by Mental Impression

Such beliefs are likely to crop up in law when decided in *ex-cathedra* fashion that manufactures precedents but does not embalm principles. In one case pregnancy from mental impression was thus by a French parliament declared possible, following a report of a jury of matrons:

"Considering the evidence showing that it is more than four years since the said Lord of Aiguemete has carnally known the said lady, declaring that although she has not carnally known her husband, yet having imagined in a dream the person and contact of the said Lord of Aiguemete, she experienced the same sensations of conception and pregnancy that she might have received in his presence, and affirming that since the absence of her husband for four years she has never had intercourse with any man, and that she has nevertheless conceived and borne the said Emanuel, which she

[3] *Fortnightly Review*, April, 1899.

believes to have come about by the forces of her imagination.

"Considering the depositions of the ladies of Albriche, of Pontriel, of Ocgeval, etc., affirming that such an accident may happen to women; that such things have happened to themselves, and that they have conceived children, of which they have been happily delivered, which resulted from certain imaginary intercourse with their absent husbands and not from copulation; considering the attestation of the midwives and of the physicians, the court decrees that the said Emanuel is and shall be declared the legitimate and true heir of the aforesaid Lord of Aigeumete, and charges the appellant to hold the said Lady of Auvermont as his wife in estate and home."

This "spiritual" method of producing parthenogenesis (virgin generation) naturally looms up in Eddyism—that marked reversion to primitive demonology. Parthenogenesis according to "mother" Eddy may result from "malicious mesmerism" or "spiritual creativeness."[4]

Other Accidents Ascribed to Spirits

When gross fetichism like this survives among middle-class plutocracy, which forms the bulk of the Eddyists, it is not surprising to find that even in races as high as the Greeks at the time of Hippocrates, epilepsy was ascribed to spirits. Against this belief Hippocrates had to fight, as his works show.[5] Insanity, hysteria, epilepsy, palsy, etc., were ascribed either to "spiritual" influences or later to demon possession. They are not diseases, since not so labeled by primitive and semicivilized man. With such lack of historical perspective, results of value from the Emmanuelists are not to be expected. They are limited by that lack of diagnostic skill in nosology, etiology and prognosis, which entails defective therapeutic diagnosis.

Therapeutic diagnosis involves not merely the beneficial effects of a remedial measure, but likewise its untoward, objectionable or dangerous consequences.

Spirituality, as Spurgeon remarked in a sermon nearly three decades ago, is placed by a strange yet natural law close to sensuality. It is therefore attended by a removal of checks on the old man Adam whereby the primitive instincts and tendencies rise to the surface. Nervous explosions of dangerous type result. As Hecker[6] points out:

"The reports of credible witnesses of assemblages for divine service in the open air (camp meetings), to which many thousands flock from great distances, surpass, indeed, all belief; for not only do they there repeat all the insane acts of the French 'Convulsionnaires' and of the English 'Jumpers,' but the disorder of their minds and of their nerves attains, at these meetings, a still greater height.

"Women have been seen to miscarry while suffering under the state of ecstacy and violent spasms into which they are thrown, and others have publicly stripped themselves and jumped into the rivers. They have swooned away by hundreds, worn out with ravings and fits; and of the 'Barkers,' who appeared among the 'Convulsionnaires' only here and there, in single cases of complete aberration of intellect, whole bands are seen running on all fours, and growling as if they wished to indicate, even by their outward form, the shocking degradation of their human nature.

"At these camp-meetings the children are witnesses of this mad infatuation, and as their weak nerves are, with the greatest facility, affected by sympathy, they, together with their parents, fall into violent fits, though they know nothing of their import, and many of them retain for life some severe nervous disorder, which, having arisen from fright and excessive excitement, will not afterward yield to medical treatment."

While Brigham,[7] a great American alienist in the forties, somewhat overestimated the untoward effects of such religious antics which have appeared in all religions, he did so because he underestimated the de-

[4] "Science and Health."
[5] Sydenham Edition.
[6] "Epidemics of the Middle Ages."
[7] "Body and Mind."

fective predisposition to motor evidences of emotional intoxication.

With the decrease in defectives and in early victims of disease, which resulted from nineteenth-century sanitation, came a decrease in predisposition to motor explosions of religious emotional intoxication. This was offset to some extent by the recrudescence of fetichism due to the mobilization of primitive minds in Eddyites, Dowieites, Holy Rollers, Spirit Fruitists and the California cult advocated by the banker, L. Gage, (which claims that the appendix is the entering point of devils), and in allied cults. Thus came tendencies, which, at the outset of the century, took theocratic communal types, like the Shakers, Perfectionists, etc.

(*To be continued.*)

The Treatment of Puerperal Eclampsia

A report of some interesting cases, which illustrate the method of treatment employed by the author and the remedial agents he has found of greatest value

By W. O. HENRY, M. D., Omaha, Nebraska

NO one as yet has been able to explain satisfactorily the cause of this direful condition, and I shall not attempt to give the pathology. However, "Dienst explains his grounds for the assumption that the symptoms of eclampsia are the result of an overaccumulation of fibrin in the blood. The filaments of fibrin cause disturbances in the circulation: thrombosis, and consecutive necrosis of the parenchyma, especially of the liver. The resulting insufficiency of the liver leads to imperfect neutralization of the toxins generated in the metabolism, thus inaugurating a vicious circle. Retention of salts is a further indispensable factor in the development of eclampsia, as the excess of fibrin alone is not sufficient to induce it. Pregnancy-nephritis causes retention of salt and thus proves an indirect factor. The leukocyte-count suggests that dropsy without albuminuria, 'pregnancy-kidney' and eclampsia are all links in the same chain."

The history of the following case is of special interest, because of the seriousness of the condition in which the patient was found, and the successful issue of the treatment pursued.

Mrs. W. H., age 20, married about one year, pregnant, expecting to be confined in about two weeks; a stout, hearty woman, apparently in perfect health. On the morning of July 2, 1908, she complained slightly of headache. Her husband said to her: "Stay in bed and I will get my own breakfast, and when I go to work I shall have your sister come and stay with you today." He left home at 7:30 o'clock, The sister reached the house at 10:30 a. m. and found Mrs. H. in convulsions on the bed. Dr. Pulver was called, who recognized the case as one of puerperal eclampsia.

I reached the bedside at about 12:30 p. m. The doctor had kept the patient almost constantly under chloroform, else she immediately went into spasms. We gave hypodermically 1-8 grain of morphine and 1-150 grain of atropine, while awaiting the arrival of some tincture of veratrum. We ordered the ambulance so she could be taken to the hospital and immediate delivery effected, in the meanwhile keeping her pretty carefully under chloroform. In spite of this, however, she would frequently recover sufficiently to have another convulsion, having two attacks while in the ambulance on the way to the hospital. Before leaving the house for the hospital ten drops of veratrum tincture were given hypodermically, and then she was taken to the hospital, which she reached at 1:30, and was carried directly to the operating room.

Dilation of the os uteri was rapidly effected and the baby delivered with forceps, but it could not be resuscitated. The patient was allowed to bleed quite freely on account of the general plethoric condition. Normal saline solution was given per rectum. Still she was inclined to have convulsions and so more chloroform was given. Ergone, 30 minims, was given hypodermically. Two drops of croton oil was also administered. Seven ounces of urine was drawn by catheter; it contained a large quantity of albumin, and epithelial, granular and hyaline casts.

Chloral and Pilocarpine Are Given

Chloral hydrate, 20 grains, was given by the bowel. At 5:30 p. m. 1-20 of a grain of pilocarpine was given hypodermically, and at 7:30 the same was repeated. At 9 o'clock p. m. chloral hydrate, 20 grains, was given by the bowel. At 9:45 she had two convulsions and chloroform was again given. The patient was perspiring freely. At 10:30 pilocarpine was again given hypodermically, and more morphine ordered, as the patient was very restless and condition bad. Also 20 grains of chloral was again given per rectum. At 10:30 she had another convulsion.

At 11 o'clock her temperature was 101° F., pulse 136, and patient more quiet. At 12 o'clock temperature was 102° F., pulse 102. Chloral hydrate, 20 grains, was given again. At 4:30 the temperature was 102.8° F., pulse 120. Patient had another convulsion. Again 20 grains of chloral was given. At 7 o'clock in the morning the patient was very restless; and at 7:30 she had another convulsion.

At 9:30 veratrum viride (10 minims) was given hypodermically and repeated every thirty minutes until twelve doses were taken. By this, with the ice-bag to the head, the pulse was brought down to 74 and the temperature to 101° F. At 9:30 a. m. also 3 minims of croton oil was given, and at 11 o'clock 3 minims more. At 6:15 she was given 3 minims more, and very free bowel movement occurred at 7:30.

July 4, Saturday morning, the patient was rational, pulse 86, temperature 101° F. She drank water freely, also took milk readily. At 7 p. m. pulse was 84, temperature 99.6° F. Veratrum viride, 10 minims hypodermically, was ordered whenever the pulse should go up; so that patient had veratrum two or three times in the next twenty-four hours.

July 5, at 5:30 p. m., pulse was 88, temperature 99.2° F.

July 8 the patient had made steady improvement and today left the hospital in good condition, passing urine freely, which shows under the microscope very great improvement, there being no casts found, though still a trace of albumin. Simple diet, free bowel movement and quiet were enjoined.

Albumin Not Always Indicative of Eclampsia

That the presence of albumin and casts do not always indicate that eclampsia will follow is illustrated by the following case:

Mrs. Oscar M., age about 24, came under my care at St. Joseph's Hospital, March 31, 1908. She had been married about one year, and was now pregnant in her third month. For two weeks she had been suffering severely with pain in her bladder and right side, having spasms of great severity.

The doctor in charge suspected a growth in the pelvis or bladder. Patient had some fever, temperature running as high as 102° F. sometimes during the day. Examination of urine showed pus, albumin and casts, and a specific gravity of 1005. The uterus was found to contain a fetus of about three months; patient seemed to be nervous, restless and vomiting considerably; bowels badly constipated.

She was put under treatment with hot-water douches, the bladder irrigated, the bowels were freely moved with colocynth, ipecac and blue-mass pills. She was given alkalithia in water three times a day, and sodium phosphate in water once a day. The bladder was irrigated once or twice a week with nitrate of silver solution. She made steady improvement until April 27, when she went home in very good condition. Urination not painful, the specific gravity, however, remaining low; still some pus and

hyaline casts. She was advised to continue taking internally urotropin, to keep the bowels free with sodium phosphate, and to live on a simple diet with plenty of milk, and to report frequently upon her condition.

September 25 examination of the urine showed specific gravity 1013, reaction acid, abundant albumin, no pus, no blood, but hyaline casts still present. Under the same general course of treatment she did very nicely until October 27, when she gave birth to a fine boy weighing 7½ pounds. Delivery was instrumental, but otherwise there was no trouble. Both baby and mother did well.

This last case is one like every physician sees who does an obstetrical practice, and shows that there may be a considerable quantity of albumin in the urine, and casts as well, without convulsions following.

The first case, I think, should be instructive, as showing how desperate these cases of eclampsia sometimes are, and yet under heroic treatment they may do very well.

I am a firm believer in the use of veratrum viride in large doses. By that I mean, doses large enough to control the pulse, and also pilocarpine in doses sufficient to produce perspiration, and then either elaterium or croton oil to carry off the excretions through the bowel. Of course the use of chloroform and chloral are only temporary expedients, but must be used sometimes to control the severity of the convulsions. But undoubtedly it is the carrying off of the poison, which has accumulated in the blood, through the skin and bowels which will give relief to the kidneys and restore the patient to health.

Successful Use of Flexner's Serum

A report of what is believed to be the first case in which the antimeningitis serum of Flexner was used with success in the State of Indiana, in the practice of Drs. Woolery and Zeuch

By LUCIUS H. ZEUCH, M. D., Chicago, Illinois
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THE patient's name is Nelda Hendrickson, Wheatfield, Indiana. Age, 14 years. Female. The father (a farmer) and the mother both living and well. Two brothers and one sister also living and in good health. No family history of tuberculosis. No miscarriages of mother. History of a cousin on the maternal side having had cerebrospinal meningitis five years previously, with sequel of deafness.

The patient has had measles and whooping-cough, but no other acute illnesses. She menstruated the first and only time two months previously.

The Condition Found on Inspection

Five days before we were called the patient complained of not feeling well upon waking, but got up, ate breakfast and went to school about a mile in the country. She returned home at noon with signs of restlessness and irritability; she vomited repeatedly. Delirium and stupor soon came on and continued until in the afternoon of the next day, when mentality cleared a little and the patient complained of severe headache. Under bromides and phenacetin the patient's condition seemed to improve, then to go up and down. On the fourth day Dr. Zeuch, the attending physician, made his second visit and found her very restless, with rigidity of the neck, and pain in head and neck severe; Kernig's sign present. At this time the previous provisional diagnosis was changed from hysteria to meningitis..

On November 21 she was found as follows: A well-developed and nourished girl; skin dry and pale; face flushed; pupils dilated

and reacting very slowly; herpes on lips; tongue swollen and with a dirty-yellow coating; sordes on teeth and gums. Neck very rigid and tender; spine very sensitive, reddened by mustard poultice. Chest normal; lungs resonant throughout; respiration 20 per minute. Heart normal. Abdomen on level with chest; tender in upper region. Liver, dulness one-half inch below costal margin; spleen not felt; no distension, no masses felt, slight tympanites in upper abdominal region. Kernig's sign present. Babinski's reverse not obtained. Stools, dark-green, soft. Temperature 103°F. Pulse 140.

The blood was found as follows: White count, 34,600. Differential count: Polymorphonuclear leukocytes, 94 percent; lymphocytes, 6 percent; hemoglobin, 85 percent.

Lumbar puncture: 35 Cc. turbid fluid, with moderate pressure. On standing fibrin clot formed. Differential cell count: Polymorphonuclear leukocytes, 87 percent; lymphocytes, 13 percent. Smear: Few diplococci seen, chiefly extracellular. Culture: Obtained pure Gram's positive diplococci.

Treatment: 30 Cc. antimeninigitis serum subdurally. November 22: Patient was restless during the early part of the preceding night; rested well during the early morning hours; wakened feeling comfortable, and bright mentally. The rigidity of the neck is markedly less and Kernig's sign is less marked. Temperature 98.8°F. Pulse 100.

Blood: White count, 18,600. Differential count: Polymorphonuclear leucocytes, 78 percent; lymphocytes, 22 percent.

Lumbar puncture: 40 Cc. slightly turbid fluid. On standing fibrin clot formed. Differential cell count: Polymorphonuclear leukocytes, 89 percent; lymphocytes, 11 percent. Smear: Occasional diplococci intracellular. Culture: Obtained pure Gram's positive diplococci.

Treatment: 30 Cc. antimeningitis serum subdurally.

November 23: Dr. Zeuch reports temperature still 98.8°F and all symptoms absent except slight rigidity of the neck and Kernig's sign less marked.

November 28: Dr. Zeuch reports patient entirely symptom-free.

From the foregoing report of this case of epidemic cerebrospinal meningitis it is evident that at last we appear to have a remedy that gives positive results in this dread affection. Out of some 450 cases of undoubted infection with the Weichselbaum coccus collected in the United States, Canada and England, the mortality has fallen from 60 to 20 percent, and the deformities have correspondingly diminished. This discovery bids fair to rival the antidiphtheritic serum as a positive cure for this form of meningitis, as the Behring serum is for diphtheria. The details of proving the diagnosis were worked out by Dr. Homer Woolery of Bloomington, Ind., to whom I am indebted for serum, the laboratory work and confirming the diagnosis.

The Second Stage of Labor: How to Manage It

This article is the fourth in the series which Professor Rittenhouse is contributing on "Every-Day Obstetrics." The most important obstetrical problems are discussed from the practical ground of the "every-day" doctor

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois
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IN a typical case of labor the first stage, or stage of dilation, ends and the second, or stage of expulsion, begins at the moment when the fully dilated os slips over the equator of the head and passes up out of reach. The head at once begins to descend rapidly in the pelvis, the membranes rupture with a gush of amniotic fluid, and the pains change their character, assuming more of a "bearing

down" tendency. The patient involuntarily strains, and aids her expulsive effort by holding her breath and grasping some object upon which she can pull, thereby increasing the downward force exerted by her abdominal and thoracic muscles.

We see many cases, however, which are not typical. Often the first and second stages overlap. Especially is this the case when the pelvis is very roomy or the head very small. Then the head often descends to the floor of the pelvis while dilation is still incomplete. In forceps delivery the nearly dilated cervix may even be dragged outside the vulva before it slips over the equator of the head.

The "Breaking of the Waters"

In the minds of the laity the "breaking of the waters" is regarded as the beginning of the stage of expulsion; but there are many exceptions. The membranes may give way before labor sets in, or at any period of the first stage; or, if they are very tough they may fail to break when the second stage begins, and may even remain intact after the expulsion of the child. In this case the infant is said to be born with a "caul" or "veil." In some countries a popular superstition attaches great value to a caul and it is dried for preservation. It is supposed to protect its possessor from death by drowning. Only a few years ago the writer saw a caul advertised for sale in *The London Times*—price, one guinea!

Of course, if a child is born with the membranes intact it must be instantly released to prevent asphyxiation; but good obstetrics requires that matters be not allowed to proceed so far. If the membranes do not rupture spontaneously at the end of the first stage, they should be broken through at once with the finger, as they now serve no good purpose and may cause delay.

The Second Stage May be Very Short

In other respects the management of the second stage is important, in that it requires close watching, for it is sometimes very short. In multiparæ it is quite frequently completed in two or three pains, and occasionally in one. If the finger be kept upon the head as it approaches the floor of the pelvis, rotation may be observed. This is caused by the fact that at the brim of the pelvis the oblique diameters are the most roomy, while at the outlet the anteroposterior, or conjugate, is the longest. The result is that the head turns to the position of least resistance. This phenomenon should not be forgotten in using forceps. If the blades are applied before rotation has taken place, allowance must be made for it. This matter has been referred to in a previous article and will be more fully discussed in the chapter on forceps.

Undoubtedly the prevention of laceration of the perineum is the one most important feature in the management of the second stage. But as this subject will be fully discussed in a future paper, it is enough to say here that most cases of laceration are preventable, that the most important element in prevention is *time*, and that a whole perineum is infinitely better than the best repair that was ever made.

The Usual Course of the Second Stage

The usual course of a second stage is that the head descends rapidly until it reaches the inferior bony ring, where it is arrested for some time while molding of both the head and the mother's soft parts takes place. During this arrest of the head there is no bulging of the perineum nor dilation of the vulva. These do not begin until the head has begun to pass the bony ring. From now until the shoulders have slipped through the vulvar orifice the danger of laceration is present, and the greatest care and watchfulness should be exercised.

The rapid descent of the head from the superior to the inferior strait at the beginning of the second stage often leads the doctor into the error of giving a too favorable prognosis as to a speedy delivery. He forgets that some delay at the inferior strait is normal; in other words, that a strait is a narrow passage. Sometimes the delay here is very great, and not until the head has begun to move again, and causes the perineum to bulge, is he justified in an-

nouncing that the end of labor is near at hand.

An Indication for the Use of Forceps

When the delay at the inferior bony ring is too prolonged, forceps should be applied and delivery assisted. Indeed, it is chiefly here that forceps are legitimately used. It is true that they occasionally must be used earlier, but it is also true that their earlier use is very often the result of rashness and bad judgment. When an obstetrician applies forceps to a head that has not reached the inferior strait, he should be perfectly sure that he has a good reason for doing so and that he appreciates the difficulties that he may encounter. In my consultation practice no one thing has so often placed me in a trying position as being called to help out someone who has rashly decided to use forceps too early. Under these circumstances, to do justice to the patient and at the same time protect the doctor from humiliation, requires a great deal of tact.

As to how long the head should be allowed to rest at the inferior strait before help is given with forceps, no hard and fast rule can be laid down. Much depends upon the degree of exhaustion of the patient, the force of the contractions, and the apparent size of the pelvis and of the head.

In general, if the head remains absolutely stationary at the lower bony ring for from thirty minutes to one hour it is proper to interfere. There is nothing to be gained and much to be lost by allowing a patient to go on for hours when she has not quite strength enough to force an unyielding head through the unyielding circle of bone. With the head at the pelvic floor, the application of forceps is so easy and the risk of injury to mother or child so trifling that no good reason exists for delay. This is, of course, on the assumption that the operator will not make a hasty delivery simply because he has forceps on and it is in his power to deliver quickly. If the application of forceps results in laceration of the perineum, then it cannot be defended. But this is not necessary. Indeed, with the patient under chloroform and forceps on, the delivery is more perfectly under control than in any other way, and one can dilate the vulvar ring as slowly as is necessary to avoid rupture of the perineum.

When the delivery is accomplished without assistance the head is delayed at the inferior bony strait and then is forced rapidly through the soft structure of the vulvar ring with frequent laceration. With the patient under anesthesia and with forceps on these conditions can be reversed, that is, the bony ring can be quickly passed, while the perineum is given plenty of time. In this manner lacerations can be reduced to less than five percent.

When Anesthesia is not Employed

When delivery takes place without anesthesia or forceps, as soon as the strain becomes severe on the perineum, the patient should be told not to bear down and the head should be held back so as to give as much time as possible, but in spite of these precautions the head often is forced though too quickly. This is why I prefer always to deliver under chloroform, using forceps if necessary, because then I am absolute master of the situation.

As soon as the head has been delivered it should be supported on the hand, pressing it well up in front of the pubes in conformity with the extreme curvature of the pelvic canal. A short delay is usual now, until the next pain expels the body. Sometimes the child makes efforts to breathe during this delay, but this is not important. The fetal circulation is still intact. If the delay is prolonged help may be given by moderate traction on the head with one hand, while the other hand hooks the index-finger under that axilla which is toward the mother's back. At the same time an assistant may place both hands on the mother's abdomen and press the child downward. In delivering a very large child all three of these methods are sometimes needed.

The traction on the head of the child must not be so great as to dislocate the neck, of course, and it is difficult to say how strong a pull is safe. From experiments made on dead infants I conclude that a

pull of fifteen pounds should be the limit. The finger in the axilla must be careful not to fracture the humerus.

Establishing Respiration

Most infants breathe and cry as soon as born, and then it is only necessary to clear the mouth of mucus with a bit of gauze on the finger. But when the child makes no effort at respiration, *prompt* and *thorough* action must be taken. And I cannot too strongly emphasize those two words, "prompt" and "thorough." Of the means commonly employed, some take too much time, and some are ineffective and trifling.

There are three things that are of supreme importance, and these will revive any infant that is not absolutely dead. They are:

1. Preserving the body-heat.
2. Holding the head lower than the body.
3. Insufflation.

All the means so often used are chiefly valuable in impressing the bystanders, and for that reason may be used in a desperate case to forestall possible criticism, since the laity expects them; but the chief reliance should be placed upon the three named above. The much-vaunted artificial respiration produces little effect upon lungs that have never been inflated. Getting a hot bath ready consumes too much time. Sprinkling with cold water robs the infant of heat. Slapping has little value. Dilating the anus has been overestimated.

The moment the child is born, if it does not breathe, the first thing is to ascertain whether its heart is beating, by taking the umbilical cord near the body between the thumb and finger and by pressing the tips of the fingers against the heart under the left costal cartilages. If the heart-beats are fairly good the child is safe. Wrap some clothing around its body and stand it on its head. The child will breathe in a few seconds. Gravity sends the blood to its head and thus the respiratory centers are stimulated to activity. This should be done before cutting the cord, as even seconds are precious.

But if the heart-beats are very feeble or cannot be felt, then a more active campaign must be set in motion without a moment's delay. As further proceedings would be hampered by the attachment to the mother, the cord should be quickly tied and cut, the child wrapped in warm flannel and laid on its back on a slope of forty-five degrees, head downward, and insufflation begun at once.

Insufflation

The great advantage of insufflation over artificial respiration lies in the fact that in the latter the air *may* go into the lungs, while in the former it *must* go into them. The recognition of this fact would often save lives not only in the newborn, but also in dealing with the victims of drowning and chloroform accidents. I have never yet failed to revive the apparently dead from chloroform by using insufflation.

The method of performing this act is comparatively simple. The two essential features are to blow air into the lungs and to press it out again, alternating about as often as in ordinary respiration.

The child, wrapped in heated flannel, is laid on a slope, head downward. The mouth and throat are cleared of mucus. A towel is laid over the face so that the operator's lips do not come in direct contact with those of the infant. The finger and thumb of one hand compress the child's nostrils so that air blown into the mouth will not escape by the nose. The operator presses his lips directly over the infant's mouth and blows through the towel, thus inflating the child's lungs. Great force should not be used as it is not required and violence might injure the air-cells of the new and delicate lung. In the meantime the disengaged hand presses moderately just below the tip of the sternum to prevent inflating the stomach. At the moment the insufflation ceases the hand last mentioned is shifted from the stomach to the thorax, the thumb being placed upon one side and the fingers upon the other, and by compressing the chest the air is forced out of the lungs.

Then the whole process is repeated: the hand is placed over the pit of the stomach, the lips are applied to the mouth, the lungs are inflated, and the air is expressed. This can easily be done twenty times a minute, and if the child is not absolutely dead, it will soon show signs of reviving.

Do Not Give Up Too Soon

It is highly important not to give up too soon. In one case I continued insufflation for forty minutes, with ultimate success. At the beginning no heart action could be felt. After five minutes of continuous insufflation a feeble beat occurred about every three seconds. Persisting for five minutes more the heart-beat had risen to about one every second. As the child made no effort to breathe I changed to artificial respiration, but under this treatment the heart-beats gradually died away. I then returned to insufflation, and thirty-three minutes after birth the infant gave a feeble gasp. In a couple of minutes more the gasp was repeated, and thereafter with increasing frequency until forty minutes after birth, when the child breathed without further assistance.

This case showed very emphatically the great value of insufflation. All through it, whenever I stopped insufflating even for ten or fifteen seconds the heart-beats at once began to die out, but resumption immediately caused them to revive. This experience also demonstrates the comparative inadequacy of artificial respiration.

Various objections have been urged against insufflation, but they are chiefly theoretical, and theories cannot stand if the facts are against them.

For one thing, it is argued that mucus will be forced into the lungs, causing pneumonia. Placing the infant head downward and wiping out the mouth and throat is a sufficient answer to this objection.

It is said that the air-cells of the lungs are in danger of injury from distension. As stated above, too much force must not be employed in blowing. The doctor is assumed to have some judgment and to use it.

Some have objected that we force into the child's lungs air that has been robbed of its oxygen in our own lungs. These objectors have talked without reflection. They have apparently overlooked two important facts in the physiology of respiration. First, when we blow out a breath the first air that comes is the air that was in the mouth, throat, trachea and larger bronchi. This has not been robbed of its oxygen, for it has not been in the air-cells. It has been warmed and moistened, both of which changes make it better adapted for being sent into the lungs of the new-born. Secondly, even the air which has been in the air-cells of the lungs has not lost all of its oxygen. If experience shows that there is enough oxygen left in expired air to revive the asphyxiated, whether infant or adult, then we have a fact of vital importance. Abundant clinical observation shows that this is true, and no bad after-effects have appeared to cast doubt upon the value of insufflation as a means of saving human life.

The Home-Circle Skeleton

The enormous extent of the venereal diseases demands that the physician should grapple with the great problem of social vice—"the home-circle skeleton". This is the theme of Dr. Gray's heart-searching paper

By ROBERT GRAY, M. D., Pichucalco, Chiapas, Mexico

PROFESSIONAL heresy in lamentably close affinity with social fidelity and conjugal constancy is an awful nightmare that ever haunts pious meditation that fain would create an ideal realm of carnal purity. In our youthful summer we dreamily rear airy castles to see them later tumble into the damnation of destruction's mass, hurled from their lofty eminence by the inevitable shocks of dark clinical experience, such as recognized social angels importuning relief from the consequences of eating the forbidden fruit of clandestine imprudence, and fair young wives in quest of deliverance from the distressingly inconvenient gonococcus.

But I have not lifted up my voice to anathematize our wayward sisters whose overtempted frailties have made my heart bleed so many times. I have always held Adam in unutterable contempt because of the brutal cowardice of his accusation of Eve.

The Stories of Betrayed Girls

It has been my unenviable lot to hear the story of many betrayed girls in the morgue-rehearsals of their nameless woe, and to be the substitute several times for the public examiner of legal harlots (a weekly scene) where the unfortunates were numerous. How many times those pathetic lines of Hood have forcefully recurred to my memory:

> Oh! it was pitiful
> Near a whole city full!
> Home she had none.

In the city where I was thus the examining functionary I saw sixteen young prostitutes, from the prettiest girls in the community, who assured me that their seducer was their priest, whose nefarious act was accomplished through the medium of their confessional, backed by clerical declaration that he was sanctified and not as other men, with whom ruin would ensue. And I found that they told me the truth. I saw this selfsame priest in his sacerdotal robes almost every day while residing in his domain.

My first contact with patients as a practising student was in pest hospitals, whose inmates were largely recruited from criminals and prostitutes. And I am justified, Pope's affirmation that "every woman is a whore at heart" notwithstanding, in telling the profession that prostitutes not born and reared in that profession were not innately prone to adopt lives of infamy; that such women were not the tempters but the tempted.

As all the very substratum of the most odious diseases that scourge mankind is involved in the ghastly pollution of human prostitution, the subject is so darkly fraught with medical importance and imposes on the profession such grave responsiblitiy that I deem it worthy of elaborately serious discussion.

Prostitution, scientifically and medically defined, implies more, very much more, than the debasing career of an abandoned woman.

The Lurking Skeleton of the Home Circle

That deplorable prostitution, which so fearfully lurks in the home circle, in seeking ways and means to evade the responsibility of becoming mothers through the medium of ovariotomy and numerous other tricks too familiar to the profession to require recapitulation, is more terribly damnable than that of the active harlot who shamelessly plies her vocation with no pretense

to any recognition more noble and pure. The headlong, reckless precipitation of the most elevated civilization on earth toward the inevitable goal of race suicide is the awful situation we are facing and must contemplate and should combat with the indomitable energy of despair.

I see here almost daily the mother whose babe has not seen the light of life one day doing her work in the kitchen—these untainted children of nature—not even assisted by the ignorant native midwife, while the collegiate mistress brings forth by the aid of forceps and is abed a month with puerperal fever and other after-birth complications that cause her physician's head and heart to ache.

And to what are such startling contracts attributable? Tight lacing and long-protracted dancing, supposing no secret college vice has been adopted—those baneful practices that only too often destroy buoyant womanhood. You all know enough of the sappers of pure home life.

But whence came the wreck and ruin we so much deplore yet are powerless to cure?

Alack and alas! professional brothers, we are involved in a defensive predicament, we must defend our own omissions rather than prosecute commissions of those weak, frail women our own cupidity and rakishness betrayed, whether directly or indirectly matters little. The evil seed was disseminated by men; it is not materially important with how much alacrity they were cultivated and propagated by women—men are the first cause of the consequences.

The Consequences of Youthful Profligacy

Youthful profligacy acquires a spendthrift custom that often precludes any possible preparation for matrimony and a sensuality that sneers and scoffs at virtue in women as a commodity for barter. Such distorted social lepers, who often acquire wealth and independence, after leading immoral bachelors' lives, late in life frequently marry, but with shriveled, loveless hearts, and then, loath to assume the difficult duties of fatherhood, school their young wives in the art of barrenness, who thereupon in turn teach their female friends how "nice it is not to be bothered with squeaking babes and troublesome children." And these evil influences spread like the plague, till they have become familiar to girls not yet out of their teens, a social leprosy more appalling than all the dread pestilences of the whole earth combined. We medical slaves become only too familiar with this social depravity to take the chances of the lottery of wedded life, if not married young.

This is a Medical Subject

I have taken up this odious subject as a fundamental principle involved in the study of deadly diseases, with which medical science is alone endowed to cope. We, gentlemen of the profession, are becoming the true lights of the world, the zealous guardians of the sanctity of the home circle, morally as well as physically, and are destined to become the social healers to the extent that redemption may yet be possible. And of this we should not despair, however herculean the repulsive task may appear. I say repulsive advisedly, because what incumbent duty could be more irksome than that of tearing the mask of a double life from the face of any household angel.

So penetrating and scrutinizing is my diagnostic acumen that I intuitively or instinctively read at a glance that there is a mental or a heart distress remorselessly preying secretly on the vitals of a victim. When such a one is a young girl or wife who has strayed into the tortuous paths of a wayward life, the restless, lack-luster eye and faded sheen of blooming innocence tell the pathetic story no tongue would dare to whisper. To some such here I have told my discovery, and instead of indignant denial the prompt question was gasped, "*Quien dijo eso?*"—"Who told you that?"

But our grand heavenly mission is not that of discovering and exposing but of preventing the necessity for such humiliating occurrences. We need to place an influence at the fireside, in the family circle, in the hearts and minds of mothers, that will render the monster evil, that is so odious

to ourselves, equally hideous to the pure and innocent that may and almost surely will become exposed to its ruinous dangers when not forearmed to defend themselves.

The Mission of the Wives

The wives of those of the profession who are in the Elysium of wedded bliss may and should become a subtle power in such delicate mission. They are a medium able and appropriate to commence with the feminine element of the husband's clientele. The medical men, on the other hand, themselves should depict in burning words the ruin and damnation that are and ever must be the inevitable results of family and social crime in contravention to the laws of nature to the chief sinners, the men.

Not one wife in ten thousand, not previously ruined and contaminated, will propose to her husband the adoption of any course to defeat the process of nature, nor secretly adopt it herself. Such debasing proposition ever emanates from man—the legitimate fruit of earlier debauchery that unfits mankind to become true husbands and blasts the germ of paternal love in hearts rendered sterile by vice.

Immorality in Mexico

Morality here in Mexico is of low degree and abundant. Most young men of the property class have peon mistresses and several children before they marry into better families, usually abandoning their mistresses, while the wife not seldom takes the children to raise.

The devotion of Mexican women, whether as mistresses or as wives, even when badly treated, is marvelous, being relatively far more faithful than those of other nationalities, while those without a mate are probably the very easiest to secure as mistresses, to live with men in the capacity of wives. Indeed, among the middle and peon classes this is the prevailing custom rather than regular marriage.

However, girls of the upper classes are prisoners before marriage and they never go out alone afterwards. They are never alone with their beaux nor can speak a word not heard by a third person. Were they given the unbridled freedom of our American women, contemplation of the dire consequences would make me shudder. Not that they are less innocent than American girls, but that men are extremely aggressive here, when opportunity offers, and publicly boast of their achievements, not hesitating to stretch the truth, whenever a woman is under discussion. And the strangest and most incredible thing is that they are rarely called to account. Then if a man is brought into court, a nominal fine of maybe twenty-five dollars is imposed for a crime such as for instance as having kidnapped a girl by force to make her his mistress.

Moral and social crime and physical disease have merged so that the whole disorders of mankind, whether reputation or health or both are involved, devolve upon the physician to modify or remedy.

How Are We to Meet this Problem?

What are we going to do about the relent less muddle of fiendish complications? We need expect nothing from the ministry of God, as the gospel is wrongfully named, as the church or its ministration has degenerated into such a huge commercialism that it exercises very little salutary influence over the erring propensities of the age.

In my humble opinion we might do mankind a far better turn and promote professional advancement in a much higher degree by devoting more time to the eradication of social evils that breed deadly incurable disease and less to the pseudo-ethics, whose sinister purpose seems to be the throttling the independent medical press and the enslavement of the medical fraternity.

No man nor combination of men can dictate to me what drugs I shall or shall not employ in my practice and secure obedience to the mandate. And I am sure the rank and file of the A. M. A. never will tolerate such abridgment of their rights for many years, as numerous personal letters to me clearly indicate a crescent and irrepressible spirit of revolt.

We need not preach the consequences of hell-fire, a retribution so near to being universally repudiated that its influence has become practically negative, however persistently proclaimed from the pulpit. Our deductions must have a visibly tangible base of long-protracted suffering and premature death, even demonstrable in the family sick-room or hospital ward. Our endowment is to save the body from dishonored ruin, by elevating the mental faculties—the ennoblement of the habitant of the upper chamber of the brain, that mystic "solar plexus" wherein suggestion enchants and revels with those magic spells that reanimate and heal where drugs are impotent to relieve. For those damnable and damning social evils secretly ensconced in the family closet—that ghastly skeleton that makes one tremble to contemplate—there is no earthly remedy; and it is certain that Omnipotence will never vouchsafe other intervention. Mankind will go on from bad to worse if science does not arrest the ruinous development of secret popular evil—popular because embraced by high-degree civilized refinement and which is constantly on the increase.

Too Little Thought Given this Problem

Probably the average American practician has not given this horrible theme serious general consideration beyond its disastrous consequences that fall to his lot to treat. It is anything else but pleasing rumination and research—this remorseless study of the dark side of prevailing social life. I have in my office recent French statistics where ovariotomy-cases are reported, the same as vital statistics in America, from which it is deduced that in fourteen years the Republic thus lost fifteen million in prospective population, basing the estimate on the lowest average of high-life birth-rate for the same period. And the enormous number of childless couples in the United States seems to justify the conclusion that this "race suicide" attains an even deplorably higher average, a condition certainly due to one method or another of defeating the order of nature, as women naturally are barren in only a very small percentage and become so accidentally in a yet less ratio.

Men, it is true, sometimes are impotent, but not to an extent to cause serious loss of population. Extreme excess of masturbation may certainly destroy the capacity of either sex to procreate, yet the actual percentage is insignificant, as the number of youths absolutely innocent of such abuse is too small to be worth discussing. The great advertising hue and cry about such impotency and its professed cures has been the arch-fraud of the age, that has robbed nervous, dejected people of more millions of dollars than the Klondike ever yielded. Hence the deduction is logically tenable that the appalling barrenness everywhere prevalent in the domain of high life is due to deliberate machinations to defeat the laws of nature involved in the delicate relations of wedded life, and as such must be met and combated by the medical fraternity.

We may as well admit the uselessness of drugs in the premises, and abandon such medication, placing our entire dependence on suggestive influence.

That nothing else and everything else combined is not nearly so important to the well-being of society and the commonwealth at large has no vestige of support for denial should not be difficult to understand.

It were idle to shrug our shoulders and try to dismiss our responsibility with an impatient gesture, as we must modify the evil if it is not to be allowed to increase unlimitedly.

Remedies for Dull Times

Why should the doctor succumb to the prevailing economic depression? May he not find ways of turning the "lemons" of fate into "lemon-aid"? The writer of this article has some suggestions to offer

By WILLIAM F. WAUGH, M. D., Chicago, Illinois

THERE are few who keep in such close touch as we with the medical profession, that is, the rank and file. During the past winter we all have had to lament the dull times. There has been little sickness. The doctor's income has fallen off, and the general money scarcity is more felt in the medical profession perhaps than in any other occupation. But this is not necessarily an evil: it depends on the way we take it. Frankly, we believe that such dull times are little short of a Godsend to many of the profession. There is so very much to do that we ought to do, but for which we have not had time, when our lives were spent in an endeavor to keep up with our work and get in all the visits our daily routine demands.

Are There Too Many Doctors?

We have little sympathy with the constantly reiterated statement that there are too many doctors. As a matter of fact, there are too few of them—that is, of real doctors. There is more work for the doctors than they can properly attend to, provided they do do it. The demands made upon the physician are much greater than they formerly were.

People talk of the profession being overcrowded, because there is, in America, about one physician for every six hundred people, whereas in many parts of Europe there is only one physician to every thousand. But they fail to take into account the fact that the population of Europe is crowded so compactly that in attending one thousand people the European physician covers very much less ground than one does in attending to half that many in widely sprawling America. Then, again, in Europe the vast bulk of the population never call for a physician until they are absolutely compelled. In Ireland it used to be (and we suppose it is yet) the custom of the people, when they see a doctor's horse hitched in front of a patient's door, to look confidently for crepe to be displayed the next day, the physician's visit being an indication that all hope has otherwise been given up.

Ten dentists are making a good living in America where one would have starved fifty years ago. It is not that our teeth are any worse, in fact they are a good deal better, but we have learned to take care of our teeth. We go to the dentist twice a year, not because we have a toothache but in order to have our teeth overhauled, that the little decays may be detected and attended to before serious damage has been done.

The Patient Should Consult the Doctor More Often

There are far more reasons why the patient should go to the physician twice a year —yes, better four times—to have such an overhauling as one gets when he is examined for life insurance. When this is done the beginning of disease may be detected and treated while yet in the curable stages. Tendencies to disease that shortens life may also be found, the man may be too fat, or too thin; plethoric or anemic; there is a little too much tension in his blood-vessels; his heart is beating a little too hard; his digestion is not perfect; he is eating too much; he does not get enough exercise. In fact, in very many ways things that are not at all known to the patients themselves may be recognized by the physician, and a few words of advice and a little well-directed treatment stops the disease in its incipiency or prevents its development, which might

otherwise occur without the warning. Illness is thus prevented and life is prolonged thereby.

Certainly it is worth any man's while to pay a liberal fee for such a form of life insurance. What form of insurance is there that can compare with the results of such an examination? A man will pay one hundred dollars a year to insure his family after his death the sum of five thousand dollars. How much better it would be if he paid that hundred dollars to the physician for four examinations, and insured the continuation of his life and his earning powers?

This is one excellent occupation for the doctor; and if the physician himself realized the value of this suggestion, he should have little difficulty in impressing it upon his patients. Our personal experience has been that the patient is more than half willing to meet us in this matter.

Give Attention to the "Little" Ailments

Another way of usefully and profitably occupying one's time during the dull season is to give attention to matters which are neglected when one is busy. Many persons are annoyed by small things. A lady has a little mole on her cheek, or there is a wart on her chin with long black hairs projecting from it. We are usually too busy with our confinements, pneumonias and fever cases, or maybe an accident case of emergency surgery to attend to such matters; but just now—why not hunt that lady up and with an electric needle remove that little blemish of hers?

Is this such a little thing, is it, really? Eighteen years ago the writer removed a wart from the face of a man, and just the other day there came from him a little note, stating that he still remembers gratefully the improvement in his appearance.

A third method of employing spare time is in hygienic work. If you have not a good book on hygiene, get one; study it, and go out among your patients. Investigate their homes, look about thoroughly, with the same care you would exert were the community threatened with an invasion of cholera or the plague. Apply the doctrine of "clean out, clean up and keep clean" to the premises, explaining to your patients why you do it, and then charge them a good large fee for it. Depend upon it, the world is far more intelligent than we give it credit for, and patients will appreciate with gratitude the interest which you take in them.

By doing these things you are apparently working against your own interests in preventing diseases you otherwise would be paid for treating. Nevertheless this is only apparent. In truth, as we progress, our work will be more and more along the line of preventive medicine, and you will find that patients do appreciate it. Of course, when a patient is howling with the pain of colic, he is grateful for the prompt relief you give him with your little hypodermic syringe; but the value of preventive measures of the kind we mention is also fully comprehended by the great mass of the more intelligent American people. If you have any doubt about it, go to the house first, say what you purpose to do, and why, and put it up to them whether they will have it done or not. Depend upon it, you will find, in the majority of cases, a warm welcome and hearty approval of your course, with the remark, such as, "Why did you doctors not start this thing a long time ago?"

Learn Success With Chronic Ailments

A fourth method of filling in spare time is the more careful and thorough study of the chronic ailments. You have on your list patients with chronic, ordinarily incurable diseases of the heart, the liver, the kidneys, the lungs. You have dropped in at their homes occasionally to "jolly them along," have not, however, seriously taken up the study of their condition. Do it now! Get the most recent literature on these maladies, see what others have been doing; then go in and try what you can do.

Many a case of epilepsy is curable, if you only use the treatment which a thorough study of the case would indicate. Oh, yes! we know well what is the usual way.

While the writer was still a medical student, one of the young girls of our "set" was seized with epilepsy. We read up on the subject, and timidly suggested to our preceptor the use of potassium bromide. The old man responded that he had used it but found it worthless—even as high a dosage as five grains thrice a day. We remarked that we had seen recommendations to push the remedy in much larger doses than this; to which he promptly replied that he had "never known any benefit to result from using these large doses, when reasonable, moderate ones failed." And there the matter rested. The girl drifted into chronic, hopeless epilepsy, in which she continued until her death. And, yet, that man was never so busy but that he could have taken time to read what others were doing in the treatment of this class of disorders.

Things Useful in Epilepsy

Doctor, before you throw this down, with the remark that there has not been anything new in the treatment of epilepsy since the introduction of the bromides, tell us, have you ever given full consideration and trial to the administration of veratrine and solanine?

These are only a few hints. You yourself know of methods in which you can usefully employ your spare time.

One thought more, Doctor. Supposing you do employ all your spare moments usefully in your own business. Each one of the many thousands to whom these words go has needs, openings, opportunities of his own. Just start at the cover of this journal and read carefully, "if you have spare time," every advertisement printed there; and consider whether you do not see in the course of this reading opportunities for the investment of some of your *spare money* that will improve you as a physician, make you a better doctor, enable you to do better work for your patients, and incidentally increase your own income. There is not any investment a physician can make that will pay him as royally as investments in his own business, in the means of doing better work and more profitable work for the patient. It beats gold mines, farming propositions and even United States bonds.

Many of your patients are suffering from various little affections, such as piles, fistulas or fissures; many of the women have lacerated cervices, or perinei, prolapsus, or sebaceous tumors. They have had them for years; they have talked to you about them, and you have put them off and forgotten about the matter. There is probably no gratitude in the world more profound than that accorded when you have relieved a man of a suffering rectum, by giving him a little anesthetic and dilating his anal sphincter.

I have said nothing in this about going to postgraduate schools and studying the specialties that should bring in money, or anything of that sort; for I have been looking at the topic rather from the viewpoint of increasing your income during this dull season. There is not one of us who has not plenty of such loose threads, which it would pay us to gather up and straighten out the tangles. There probably is good reason for circumcising or dilating the prepuce for seventy percent of the boys under five years of age in your practice. The number of men and women who would be benefited by dilating the anal sphincter would surprise you, if you gave attention to that one point.

Doctor, so long as there is a solitary case on which you can usefully put thought, reading and research, you have no right to talk about dull times.

Digitalis and the Digitalis Group

Practical pharmacodynamic notes concerning digitalis, its active principles and similar remedies: with a consideration of its proper therapeutic applications

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La digitale est un remede le plus grand de tous, mais il faut savoir s'en servir.—*Huchard.*

I. History

DIGITALIS purpurea is a biannual plant of the family Scrophulariaceæ. Its name comes from the form of its flowers, which in appearance suggest a sewing-thimble. As early as the thirteenth century this plant was employed as an external medicament, although apparently without great success, since in 1776 Murray describes it as a remedy which has no very precise indications. However, in 1775 the English physician, Withering, was already employing it in dropsy. A little later Thilenius introduced it into the German Pharmacopeia.

II. Active Principles

Only the leaves of digitalis are employed in medicine. Their activity varies with each plant and with the conditions of sun or shade, temperature, soil and method of preservation. This variability has made it necessary that the active principles of the plant be isolated in a pure state.

In 1844 Homolle and Quevenne put on the market an amorphous digitalin prepared by extracting the leaves of digitalis with water. This is a white amorphous powder, very bitter, sparingly soluble in water, very soluble in alcohol, nearly insoluble in chloroform. This digitalin is still called *digitalinum amorphum, vel incrystallisabile, vel Germanicum purum.* Its employment has been abandoned in Europe. It contains about 60 percent of digitonin mixed with digitalein.

In 1868 Nativelle exhausted with alcohol the residues after extracting with water. He thus obtained the French crystallized digitalin of Nativelle (*digitalinum crystallisatum, vel activum, vel verum*). This body is nearly pure digitoxin (Schmiedeberg), a toxiresin, identical possibly with strophanthin or ouabain.

According to Schmiedeberg digitalis contains:

1. Digitalin, an amorphous glucoside very readily soluble in water. This body Schmiedeberg calls *digitalinum verum* or *digitalinum Kiliani.* (The appellation, *digitalinum verum*, as signifying also the crystallized digitalin of Nativelle, which is the equivalent of digitoxin, ought to be abandoned in order to avoid confusion.)

2. Digitalein, which is not to be distinguished from digitalin except by its solubility in water. Its therapeutic activity is twenty times less than that of digitoxin.

3. Digitoxin, which is absolutely insoluble in water. This body is the equivalent to the crystallized digitalin of Nativelle.

4. Digitaliresin and toxiresin, the action of which is that of picrotoxin.

5. Digitonin, which is a saponid. This body is very abundant in the plant. It is soluble in water, possesses no digitalis action, but renders the otherwise insoluble digitoxin soluble in water. The gastric troubles caused by digitalis are attributed to this body.*

It is imperative that we abandon all of this confusing terminology and retain among

*The question of the active principles of digitalis at present is a confusing one, because the same name may either designate different bodies, or different names designate the same body. Thus Kiliani calls digitoxin a crystallized glucoside, soluble in water, and this, as a matter of fact, corresponds to digitalein. Schmiedeberg calls the same substance digitoxin that the French refer to as the crystallized digitalin of Nativelle. The term *digitalinum verum* designates digitoxin as well as the digitalin of Kiliani. Adrian, having shown that in the treatment of the plant with chloroform two products are obtained, one crystallized digitoxin, the other amorphous, just as active as digitoxin; he has called the latter body chloroformic amorphous digitalin.

the active principles of digitalis, as Penzoldt has done, only

1. *Digitalinum verum* of Kiliani and
2. *Digitalinum crystallisatum* (crystallized digitalin of Nativelle).

Digalen (Hoffman-LaRoche, Basle) is a glycerin-alcohol-water solution of the soluble digitoxin of Cloetta, containing 3 decimilligrams per Cc. This dose is equal to 15 centigrams of the leaves collected in September. This soluble digitoxin seems to be digitalein. Its author keeps its composition secret.

III. Pharmacodynamic Action

Digitalis acts almost exclusively on the myocardium. At the beginning of its therapeutic action the *elasticity* of the muscle is modified without changing its *contractility*. The *extensibility* of the muscle is augmented, but after this hypernormal extension the muscular fiber returns again to its primary length; its *elasticity* is therefore perfect, and simultaneously *the force of the contraction is augmented.*

These modifications increase the amplitude of the diastole and the volume of the pulse so that each contraction of the heart drives into the arterial vessels a greater quantity of blood than in the ordinary state.

The blood-pressure is raised under the influence of the digitalics because the arteries are better filled as a result of the augmentation of the volume of the pulse; the left heart in a unit of time pumps out more blood than in the ordinary state.

The digitalics diminish the frequency of the pulse by stimulating the pneumogastric centers and the peripheral inhibitory apparatus. This stimulation is due to the elevation of blood pressure.

The systole becomes longer. In cases of valvular insufficiency the blood cannot then immediately return to the heart and has more time to pass from the arteries into the veins.

The diuretic action of digitalis is due probably to the increase of blood pressure. By reenforcing the systole the digitalis increases the rapidity of the blood current and thus promotes the osmotic changes in the neighborhood of the capillary vessels. According to the laws of physiochemistry it is because of this mechanism that the urine eliminates much of the sodium chloride retained in edematous tissues. In patients suffering from heart disease with peripheral edema and visceral congestion digitalis acts slightly on the heart but strongly on the kidney. This fact has practical importance. It demonstrates that in asystole, after having gained the disappearance of edema, it is necessary to think, soon after, of securing the cardiac action of the drug by giving it in anti-asystolic doses.

The augumentation of the work of the heart not only produces propulsion of the blood but also suction of blood by the valves. This suction unloads the venous system and thus diminishes the increased pressure due to blood stasis. (*Hochdruckstauung* of Sahli).

Furthermore, the improvement in circulation diminishes the asphyxia which irritates the medulla oblongata; the vasoconstrictive action due to this irritation disappearing, the blood pressure becomes lower.

The suction exercised on the tissues has a very great importance in the treatment of pneumonia and other affections, because it dissipates congestion while the pathogenic agents and toxins present are thus removed from the blood current.

Still more, the blood is capable of purifying itself better than the tissues. First, it dilutes the toxic products and dissipates the microbes. It is also antiseptic because of the oxygen it carries. Finally, it transports the noxious bodies to those organs charged with their destruction. And farther, Wendel attributes to the blood bacteriolytic and antitoxic properties. Furthermore, it is enough to justify the use of digitalis in infections because more than any other remedy it increases the number of polymorphic nucleated leucocytes circulating in the blood.

Digitalis is considered by most physicians a vasoconstrictor. According to Lauder-Brunton this constriction is rapidly followed by vascular dilation.

IV. Undesirable Secondary Actions

These are not unusual, but they follow particularly the use of the infusion and (much less however) of the powder and the glucosides. These symptoms are malaise, loss of appetite and vomiting.

The delirium which has been attributed to digitalis is observed after profuse diuresis. It is a delirium of reabsorption. The toxic bodies which had been immobilized in the tissues pass into the blood and cause irritation of the brain.

V. Therapeutic Indications of Digitalis

At the present time digitalis is not employed as frequently, as methodically or as energetically as it ought to be. Its most general indication is in protracted weakness of the heart with its consequences.

What are the signs of this weakness? Lack of blood in the arteries and venous stasis are readily recognized by the smallness, irregularity and frequency of the pulse; but the employment of digitalis cannot be limited exclusively to these states. The pulse may be regular, the frequency normal, the number of pulsations possibly low and digitalis still certainly be very useful. In cases in which the pulse had fallen to 40 and even to 30 Penzoldt has seen digitalis increase the number of pulsations and improve the condition.

In defective cardiac compensation digitalis renders the pulse more regular and less frequent; the edema, cyanosis, dyspnea and other pathologic phenomena disappear.

The action of digitalis may be shown in the insufficiency of the myocardium which occurs in the course of cardiac hypertrophy and dilation as a result of chronic intoxication by coffee, tea and tobacco. Hearts fatigued by physical efforts and anxiety are also restored by digitalis.

Its action is often very striking in the defects of compensation from the hypertrophy secondary to valvular leaks. Whatever may be the nature of these leaks, let us note here that digitalis is of no value in compensated aortic insufficiency, because it prolongs the diastolic period and increases the difficulty to be overcome; each pause in the heart-rhythm really increases the regurgitation of the blood into the ventricle. This regurgitation is due to the aortic insufficiency. In such a case the use of the remedy increases the trouble. However, this interdiction is not a permanent one; it disappears when the aortic insufficiency is no longer compensated and dilation of the heart with asystolic complications is produced. At this time the condition of the myocardium indicates digitalis. (Huchard.)

The loss of compensation in hypertrophy of the right heart occurring in pulmonary emphysema is beneficially influenced by digitalis. In these cases the dyspnea and the catarrh often disappear rapidly. The cause of failure in these conditions is no more clear than those which occur from time to time in the treatment of valvular affections. When the indication for digitalis is clear it is better to meet it than to temporize by using expectorants, resolvents or narcotics.

The curative action of digitalis is uncertain in the insufficiency of the myocardium occurring in nephritis. Here improvement is the rule, but it does not last. Its action is clearly *nil* in fatty degeneration of the myocardium. In cases in which digitalis has produced no effect Penzoldt has found this degeneration present in 70 percent of cases. In the remaining 30 percent there was fibrous myocarditis or some grave complication. These states hardly being possible of recognition during life, one cannot tell as to possible failures; however, their presence makes the prognosis gloomy.

I have just spoken of the value of digitalis when employed in weakness of the heart occurring in the course of infectious maladies and particularly in pneumonia. If one waits for this weakness to show itself before giving the remedy, he will use it too late, because the action of digitalis is slow. If one gives digitalis from the beginning, he cannot know, when the case turns out well, whether success is due to the medicament or not. It is certain that pneumonia patients die even when they receive digitalis at the proper time, although the digitalis-

pulse is demonstrated to be present. In a word, the systematic employment of d gitalis should be imposed in these cases, since this method of treatment never does harm and is very probably useful. (Penzoldt.)

On this subject Huchard has said much more categorically: "The disease is in the lungs, the danger in the heart; this danger digitalis alone can arrest."

Digitalis is useful in the treatment of glaucoma when the heart becomes feeble. Nervous palpitations are sometimes diminished by digitalis, but it is proper in such cases to be reticent as to the effect. Digitalis is contraindicated in Basedow's disease and usually in uremia, as we shall see a little further on.

The digitalics prove of unexpected value in the treatment of chlorosis, and for this reason: According to the analyses of Grawitz, in severe chlorosis the red cells form but one-fifth of the total volume of the blood, while normally they should be present to the amount of half its volume. The number of red cells is slightly diminished, but the content of each cell in hemoglobin is greatly reduced. These red cells are swollen and infiltrated with plasma which leaves the cells during centrifugation and coagulation. The total volume of the red cells is greater in the circulating blood than the blood extravasated from the vessels.

The edema of the red cells is similar to the cutaneous edema which gives to chlorotics their swollen aspect and which produces the effacement of the papillæ and possibly the dilation of the heart so frequent in chlorotics.

The total amount of plasma is increased and its content in albumen is a little diminished. There is at the same time polyplasmia and hydremia. Let us recall also that on being cured chlorotics lose weight. All these facts oblige us to attribute these derangements of the tissues to the organic liquids, these being in a state of stagnation. E. Grawitz explains by certain troubles of a nervous order the pathologic picture of chlorosis. This hypothesis is very attrac tive even if at first one cannot see very well how the red cells, which are not under the influence of the nervous system, can be penetrated by the plasma. This fact is explained, nevertheless, if one considers that the cells are derived from the bone-marrow, itself infiltrated and controlling the outflow of blood to the hematopoietic apparatus.

Whatever the character of this stagnation, this abnormal penetration of the plasma into the cells, which should contain but little of it—whether the cause of this trouble be of a nervous order or due to an intoxication—one indication appears imperative, namely, to diminish the quantity of the plasma, to drain the body in order to bring back to normal the total quantity of volume of organic liquids. The digitalics admirably meet this therapeutic indication.

It is this fact which Penzoldt has so clearly grasped. From the very beginning this author combats the dilation of the heart in chlorotics with digitalis. He has obtained excellent results, and with the consecutive administration of iron he has cured his patients more rapidly than under the usual treatment. Basing my work upon analogous considerations, I have for some time been giving caffeine and theobromine at the beginning of treatment. For two months I have associated digitalis with these two alkaloids. My results are in accord with those of Penzoldt. The dose of digitalis employed is the anti-asystolic one.

Diagnostic indication: In those cases in which the results of auscultation of the heart are doubtful on account of inversion of the silences or the arhythmia of palpitation, it suffices to prescribe digitalis, for three or four days, to the extent of 25 centigrams of the leaf or 0.25 milligram of digitoxin per day; the heart will become calm and the diagnosis can then be made.

Digitalis is absorbed slowly; its action is rather tardy; it is also eliminated slowly. Its slowness of absorption renders useless the dosimetric employment of digitalis since the body itself is charged with distributing the remedy in small doses at quite short intervals. It is better to hold to the precepts to be given further on.

The slowness of elimination of the digitalics (strophanthus excepted) involves risk of accumulation of the drug. This danger,

however, has been exaggerated. (Eichhorst, Zurich).

Digitalis Poisoning.—Prodromes: Slowing of the pulse. When the pulse falls below 60 it is necessary to suspend the drug. Malaise, pain in the stomach, diarrhea, precordial distress, hard pulse, vertigo.

Actual Intoxication.—Hallucinations, mental confusion, anuria, collapse, paralysis of the heart. Treatment: Lavage of the stomach, purgatives, then diuretics, then analeptics (caffeine, theobromine, camphorated oil subcutaneously).

Digitalis Leaves.—One Gram of digitalis leaves is equivalent to one milligram of digitoxin; to 2 centigrams of digitalinum verum Kiliani; to 0.66 Cc. of digalen; to one Gram of digipuratum, Knoll. The maximum single dose of digitalis leaves is 20 centigrams, which may be repeated five times in twenty-four hours. It is prudent not to repeat this dose until fifteen days later.

The effects of digitalis vary greatly with the doses chosen. It is necessary to make, with Huchard, these distinctions:

1. The anti-asystolic, or massive, dose, which is 1 gram of the leaves or 1 milligram of digitoxin, given in two portions in a day. Such a dose should not be repeated until after fifteen or twenty days. As I have said before, the indications for this dose are insufficiency of the heart whether accompanied or not by edema or vascular stasis, the infectious maladies in which the heart is endangered, and chlorosis.

2. The cardiotonic and sedative dose of Huchard is one-fourth of a milligram of digitoxin per day for three or four days. This dose may be repeated every twenty or thirty days. It calms the heart, and is of value in those cases in which the quality of the cardiac fiber has changed slightly (dilation of the heart in recent valvular affections, obesity, cardiopathies of the menopause). It is a good plan to give this dose before surgical intervention.

The continuous cardiotonic dose of Huchard: This is one-tenth of a milligram of digitoxin per day for ten days in a month or one-fifth of a milligram for four or five days a month. This dose is employed in the majority of the advanced valvular affections and in arterial cardiopathies. It is also useful and of great advantage in mitral regurgitation. In these cases it is not necessary for efficiency that the regurgitation should succeed the hyposystolic period. In this disease, so often associated with dyspnea, the digitalin ought to be given systematically in maintaining cardiotonic dosage. The ventricular diastole is prolonged, refilling of the ventricle has time for completion, while the regurgitation awaits the accomplishment of this refilling; the absence of refilling is the cause of the dyspnea.

Doses of this size succeed particularly in cases in which the cardiac muscular fiber is only decidedly altered. In nephrosclerosis with cardiac *bruit de galop*, when the milk and vegetable regimen and theobromine do not relieve the oppression, digitalis given in these doses is of very great service. Thanks to it, some of these patients, bedridden for many months, have been able to go back to their work.

Medication is continued for nine or ten days. The first day the patient may take a double quantity, perhaps two-tenths of a milligram. It may be discontinued for eight, ten, fifteen or thirty days, according to the degree of dyspnea, and recommenced again, indefinitely. The arterial cardiopathies and senile affections of the heart do well under these small doses, which do not whip up too strongly the central organ and exercise upon it a mild and continuous stimulation.

When the lesion of the myocardium is accompanied by a valvular lesion, the cardiac difficulty is greater. It is often necessary to give the digitoxin in doses of two-tenths of a milligram, continued for five days, to obtain the effect.

One other reason for lack of success is the prior employment of large doses of digitalis. Such untimely medication produces complete insensibility of the heart to the action of digitalis. In these cases the small doses no longer act; but they do no harm, while large doses precipitate matters. (Fiesinger.)

(*To be continued*)

Lessons in Hot-Air Therapy

A discussion of the means and methods and therapeutic possibilities of one of the modern non-medicinal remedial agents. This subject will be discussed at some length in a number of papers

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Introductory

THE treatment of disease by means of superheated air has been placed upon a scientific basis by August Bier, the famous surgeon of Berlin. He has advocated its use for the past fifteen years in certain diseases, and specialists have used the treatment with success in nearly every country. The writer has used this treatment in his practice for the past seven years, and he believes that in certain disease-conditions it is unequaled by any other treatment. To bring this method to the attention of practicians more generally by describing his technic and the results of treatment is the object of these lessons. An efficient and low-priced apparatus is described, which allows the treatment to be used not solely in our offices but to be brought to our patients' homes.

The cases here reported illustrating the treatment are for the greater number the writer's own. The other means of cure that have been also used, both dietetic and medicinal, are likewise treated of. The writer believes that we owe it to our patients to employ all methods of treatment that are demonstrated clinically to be curative. The ultrascientific standpoint of some physicians, who will not use any remedies except those the action of which is scientifically explainable, the writer holds to be irrational and based on the experience of that school of physicians who were so versed and steeped in the pathology (dead-house lore) of disease that they had no time to test clinically drugs or other means that are known by many clinicians to be curative.

Socalled "scientific" medicine lags far behind clinical medicine. Clinically we know that iron (even organic salts of it) is curative in chlorosis. But why? Scientific medicine has not yet answered fully. For centuries we have known that mercury is curative in syphilis. But only recently has scientific medicine shown us the probable reason for this curative action to be the bactericidal action of mercury on the spirocheta pallida. As clinicians know iron to be curative in chlorosis, in like manner many know that nuclein, echinacea, digitalin (Germanic), calx iodata, calcium sulphide, and many other drugs are curative in diseased conditions. The why and wherefore are in some cases more clearly understood than in the case of the curative action of iron, but in most cases the same degree of scientific darkness prevails.

This darkness, of course, is gradually giving place to light; but it certainly would be unwise for us practicians to refuse to use the rich clinical findings of practical medicine until scientific light had penetrated the secrets of living pathology and its modifications by drugs or other remedial measures. In hematology progress is being made, and the properties of the blood in health—bactericidal, solvent, absorptive, etc. —are being investigated as never before. This field of investigation promises much in practical medicine, and it may be that not far in the future means, chemical or other, will be found that will increase those properties, thus increasing our control of the blood and therefore of disease.

Hot-Air Therapy Is Very Effective

Clinically now, however, we have a therapy powerful in results, and it behooves the practician to make use of this therapy, to strive to increase it, and thus increase his power for good in the practice of his pro-

fession. Hot-air therapy, with adjuvants, is most effective in many disease-conditions. The writer will illustrate this by clinical examples, and endeavor to explain scientifically as well as he can the reasons for its efficacy. Most of what he writes is based on the investigations of others, more particularly the original investigations of the brilliant German surgeon, Bier, to whom we are indebted for this efficient means of cure.

Lesson I. The Physical Effects of Hot-Air Treatment

The physical effects of hot-air treatment are due to the action of hot air in increasing the local and general circulation of the blood, and to the properties which the blood possesses. Bier, the eminent German surgeon, has investigated the effects of hyperemia produced in different ways, upon diseases. These lessons will concern themselves only with the hyperemia produced by the application of hot air.

To understand the beneficial and curative action of hot-air treatment, it is well to understand the blood and its properties relative to disease. The influence of the blood in the cure of disease, while long recognized by the profession and the laity, has only recently been studied scientifically. The properties of the blood that come into play in the control and cure of disease are chiefly the analgesic, the absorbent, the solvent, the nutritive, and the bactericidal.

The analgesic effects of the blood are witnessed when the severe pain and tenderness accompanying chronic rheumatism are relieved by thirty minutes' or more of the application of air heated to about 200° F. In a milder degree this property is manifested in the application of hot poultices, hot-water-bags, etc., all of which produce hyperemia of the part to which they are applied and lessen pain even when deeply seated.

How Explain the Analgesic Effects of Heat?

If the dictum, "pain is the cry of a nerve for food," be true, we have a satisfactory explanation of the soothing effects of such hot applications, inasmuch as they increase the blood flow in the parts over which they are applied and as a consequence the nerves receive more pabulum—food—from the increased flow of blood bathing the tissues. Or it may be that irritating substances that cause pain are washed away in the larger volume of blood circulating in the parts. Whatever the explanation, the fact remains that hyperemia has an analgesic effect that can be relied upon safely, in many cases, to prove very efficacious.

The absorbent effects of the blood are witnessed in pleurisy with effusion, in those cases in which the effusion becomes absorbed; and in joint effusions, especially in traumatic synovitis. For a long time it was supposed that the lymphatics were the main channels of absorption; but it is now acknowledged that the blood-vessels are in reality the channels through which absorption mainly takes place. This power of absorption is greatly increased by hot-air treatment. Use is made of this fact when traumatic synovitis and sprains are treated with hot air. No treatment approaches in efficacy that of hot air in these affections, and cases illustrating this will be related further on.

The Solvent Action of Blood

The solvent powers of the blood are demonstrated in the dissolving (previous to absorption) of catgut and tendon sutures in the tissues of the body. Hot-air applications increase this solvent effect. I have witnessed the disappearance of nodules of rheumatic origin under the effect of this treatment. Bier has witnessed nodules upon tendons and arthritic granulations melt away likewise under hot-air hyperemia. It seems probable that in time we may be able to increase this solvent action of the blood by introducing some chemical into the blood current.

Reports have appeared in the medical journals of the dissolving effect of thiosinamin injections upon scar-tissue. The substance in the blood that has this solvent effect is not yet isolated nor understood. When it is, we shall have gained a long step in advance in the treatment of many affec-

tions. Whatever the substance may be, its action is enhanced by hot-air treatment.

The nutritive, or regenerative, properties of the blood are manifested by the phenomena of tissue growth, as in the hair, the skin, the nails. I have witnessed quicker bone reunion by means of hot-air treatment in fracture cases, I have also seen the healing of chronic varicose ulcers hastened by the same treatment. Both may be considered examples of the regenerative powers of the blood. It is easy to understand this action when we remember that the local circulation is increased by hot-air hyperemia, and that it is through the blood that the regeneration of tissue takes place.

Having considered briefly the physical properties pertaining to hot-air hyperemia, I shall describe in the next lesson the technic employed in its production.

The New School of Medicine

The writer of this article—a man who respects not only his specialty, but also the general profession and indeed the general public, but not quacks—for obvious reasons desires to remain incognito. He wrote this as a letter, but we choose to print it as an article.

FOR a good many years there has been arising in this fraud-filled country of ours a rather numerous class of pseudomedical persons whose strength and influence have now become so great as not to be ignorable by educated physicians any longer. I refer to a godless category of men who, though devoid of every sort and kind of medical training, are placing themselves before the public as "refractionists," "ophthalmologists," "eye-specialists," and even "doctors." These men are sometimes druggists, sometimes dealers in drygoods or notions, sometimes jewelers, and sometimes peddlers; they are, however, always and everywhere bloodsuckers and quacks.

Would it seem at first sight possible that the medical profession—the regular, hard-headed, conservative, well-meaning, philanthropic and humane medical fraternity—would support such a brood of ignorant pretenders and health-ruining knaves?

It certainly would not.

And yet, as a fact, such is actually the case. From end to end of this broad country of ours the medical profession has supported, and in considerable numbers, this misbegotten brood of Satan and Cupidity. And now behold the result, the result not merely to qualified specialists, but even to the endorsing practicians themselves: from Portland, Maine, to Los Angeles, California, and from Seattle, Washington, to Jacksonville, Florida, these "eye-specialists" are brazenly pretending to cure not merely diseases of the eye but diseases of every sort and description by means of their magical lenses.

Spectacles for the Cure of Piles

Have you piles?* Step in. We have glasses that make a complete cure of piles in six weeks. Have you "liver disease," or "disease of the kidneys," "strain of the spine," or "affection of the liver?" All right, we will cure you. And we even guarantee the cure: come in. And in goes the fly to the web which a doctor has assisted to weave.

In order that you may see that I do not exaggerate the position which these fellows assume toward the treatment, not only of special but also of general diseases, I enclose an actual circular that has been in use about our town for perhaps as long as

*A joke has gone the rounds for years to the effect that a man, on being advised by a jeweler to wear spectacles for piles, inquired whether or not he was to "carry the articles upon his hips." A refractionist, who dropped into my office recently for a "ringing" in his ears, was laughing a little about his work, and I ventured, unthoughtedly, to repeat the time-honored joke. Instantly, however, I was informed with great dignity and *hauteur* that the only truly rational and scientific treatment for piles was a pair of properly fitted spectacles! The man was entirely in earnest.

a year. You will see that it professes to treat, merely by spectacles, every class of diseases whatsoever. By the way, you will also observe in this circular the names of two of our family physicians, standing out clearly authoritative among the references given. This circular is only a single specimen of what such "specialists" are sending forth, and I admit that it is one of the very worst: but the others that I have seen are nearly as mad and as bad.

Oh, the wonderful, wonderful lenses! the mysterious, miraculous lenses, with which uneducated people cure diseases of every sort and kind! Oh, the "magical, ragical, tragical spectacles," as I heard a fakir on the street proclaiming the other day.

"Tragical," indeed! Being merely a specialist, I see but a small percent of the people who have been treated by these men, and yet I have beheld some "tragical" instances, I assure you. And now I want to make a little case-report, selecting but a few of the pertinent examples out of a list of very many.

Retinal Atrophy Due to Syphilis

Case 1. Lady, aged 65. Retinal atrophy, result of syphilis. Marks of syphilis on various portions of the body. A good old thing, and her neighbors speak nothing but words of praise concerning her, but her husband is a "tough nut." How long have her eyes been affected? "Six years." Six years? "Exactly." Why! why have you never seen a specialist? "Oh, I *have* seen three, and was treated for a very long time by each, but they did not do me any good. A neighbor woman said that I ought to come to you. So, you see, here I am." I enquired the names of the doctors whom she had consulted, and was given the family cognomens of three of the most notorious jeweler-quacks that the state of Illinois has produced. When I inquired how it was that she had gone to consult these men, I was told that some family physician in every single instance had sent her. She even gave me their names.

Poor old broken-down, blind and helpless thing! Sent by physicians, who should have known better, to towns some miles away each time, in order to expend the little money that she had with men who could by no possibility be of aid to her—with men, that is, who had never qualified for admission to a medical college, nor had a single day of lectures, or read a single work on anatomy, or seen a single eye dissected, or had a particle, or a speck, or a fraction of a microscopic atom of training of any sort or kind whatsoever, excepting only a "course" of from four to six weeks by correspondence with a heartless city diploma-mill. All that the heartless diploma-mill had even attempted to instil into the minds of these ignorant pretenders was a little of the elements of spectacle-fitting, and the time consumed would not suffice for the acquirement, even by a genius, of a fourth-rate familiarity with the uses of the retinoscope.

Glaucoma—Treated by a Jeweler!

Case 2.—A man of 45. Left eye blind, as a result of subacute glaucoma. Would have been a good case for operation, but an iridectomy could be of no service now. Was "treated" by a jeweler who changed his glasses frequently and "exercised" the eyes with a bar of prisms. I spoke up rather sharply to the man, somewhat upbraiding him for having betaken himself to a jeweler in order to get treatment for an eye. But he silenced me instanter and forever by remarking that he had been "referred" to the Jeweler by Dr. So-and-So, his family physician, "in whom I have the utmost confidence." Victory twice over for the ignorant quack, supported as he was by the family physician.

Case 3.—A young gentleman, extremely myopic. I fitted him with glasses to be worn for distance only. I considerably undercorrected his vision, however, because he had already a slight detachment of the retina, and full-strength lenses, though they would, of course, confer considerably better vision, would be dangerous to his sight. A friend having sent him to a jeweler about six months after I saw him, the jeweler offered him his full correction, calling attention triumphantly to the fact that his (the

jeweler's) glasses made the young man see better than did mine. The patient consulted a family physician, who advised him to follow the advice of the jeweler, and to wear the glasses with which he saw the best. Result: complete detachment of the retina, and, of course, total abrogation of the sight.

Foreign Body Treated as "Granulations"

Case 4.—This case was that of a very young and handsome woman who had a foreign body in the iris. She was not "referred" to the quack, but met him in the office of her family doctor, in which well-chosen coign of vantage regularly, for three days out of every month, the spider had spun his vicious web, the doctor having helped him spin it. The lady's case had been diagnosed as "granulations," and, of course, had been treated with spectacles.* Soon there supervened iritis; and then panophthalmitis. The lady's eye was entirely blind, when she first came into my office, and I was compelled to remove it in order to save the other eye, which was suffering from symptoms of sympathetic irritation.

But what would be the use of multiplying instances? Physicians who make a specialty of diseases of the eye can relate such instances by dozens and by scores. It is not at all true, as I once heard a family doctor remark, "Oh, well, these fellows at least do not do any harm." For indeed they do harm. Their glasses are "tragical" enough, I warrant, to the man or the woman or the boy or the girl that loses an eye, or, more tragical still, steps wholly within "the never-ending dark" by reason of the time allowed to elapse while illiterate fellows who ought to be in common schools learning how to read and spell, were posing as scientists at their dear sight's expense—backed by "our family doctor, in whom we had the utmost confidence."

The Responsibliity of the Doctor

What is the reason why educated physicians who have had the benefit of years and years of study in some of the best colleges of this land, and also of years and years of experience in a credulous and hard-hearted world, will back the schemes of these nefarious impostors, these self-evident grafters, these bums and foot-pads and highwaymen that beset the paths of healing, these advertising, impudent, insolent, inexpressible scalawags and knaves, by the side of whom the licensed physician who advertises, is respectable and even praiseworthy, since the latter at least can do his patients a certain amount of good? God only knows, but I will try to answer:

1. Some of the doctors who support these fellows do so merely to get rid of disagreeable cases, and, being minded not to bother about such cases themselves, they simply care not where such patients go. Such doctors, I believe, are a very small class.

2. Some doctors refer their cases to these jeweler-physicians because they do not understand that the fitting of spectacles requires for its proper performance a knowledge of anatomy and physiology quite as profound as does the treatment of the eye by medicines and surgery, and, in any event, cannot properly be dissociated from the knowledge and treatment of the various eye diseases. This class of physicians, also, is, I think, a comparatively small one.

3. Still other physicians send patients to the druggist eye-doctor, or the jeweler eye-doctor, because they think it gains for themselves the friendship, or at least the influence, of the friends and relatives of the charlatan in question. This motive being an extremely low one, I do not believe that many physicians entertain it.

*It may be as well to explain that the Supreme Court of Illinois has expressly excepted from the operation of the Medical Practice Act the fitting of spectacles and eyeglasses. That was and is the spectacle quack's opportunity, and on that slender basis he has gradually established—assisted, of course, by the doctor of medicine himself—an entirely new school, a school which, like osteopathy and Christian science, "does not rely upon drugs for success." Osteopathy and Christian science have done well, at least financially, but they lacked from the beginning the support of physicians. The "graduate optician," however, the uneducated "eye-specialist," the four-weeks spectacle fitter, the all-diseases-cured-by-spectacles-quack, has had the support, from the beginning, of this, the most enlightened (and soft-headed) profession on the face of the earth. This last "drugless" school ought to do much better, and probably will, than osteos and Christian scientists have done—especially to judge by the laws which have recently been enacted in a number of the states to protect these four-weeks scientists.

A warning to the medical profession: Whenever a doctor is requested by a jeweler to endorse a bill pending before the legislature, the ostensible purpose of which is merely to license men for the fitting of spectacles (which they can do, and are doing, already, without license) that physician should always look very, very closely to the ultimate legal consequences of such a bill, if passed.

4. The doctors constituting this fourth class are also extremely small in number, for the actuating motive of this class is also extremely low. The doctors of this fourth class are those who permit some traveling "eye-specialist" (with a four-weeks' education) to enjoy the advantages of seeing patients in their (the aforesaid family phys'cian's) office, because they, the said family physicians, trust and believe that, by such a bit of sharp practice, they will be enabled to become professionally acquainted with the clients of other physicians, and thus, later, perhaps, be able to secure their "patronage" in professional work.

5. This is by far the largest class. It constitutes, I think, the overwhelming majority of that particular portion of the medical profession which sends its ocular patients to druggists and jewelers. This is the class who are always ready to be "ridden" or "worked;" who buy gold bricks and canned moonlight. This is the class that endorses the "Every Man His Own Physician," which the village book-agent peddles from house to house, and who will not say No, when people inquire if he believes in patent medicines and other sorts of magic. He is the man that never cooperates with his fellow physicians, thus, by maintaining the rights of the whole fraternity medical, to make success for every single one of its members possible. He is with the public, right or wrong, first, last and all the time, and with his fellow physicians almost never, if ever. He does not understand that the interests of all right-meaning physicians are well-nigh absolutely identical. In fact he is soft in the head, not overly intellectual, "an easy, facile mark." "An easy, facile mark" indeed he has proved for the jeweler spectacle-fitting quack, and now he is reaping the reward of his folly—a new "school." The most horrible part of the whole matter is that the ignorant, helpless, hopeless, nonscientific portion of the public is reaping alongside of him, and reaping something, too, that is infinitely worse, beyond cavil, than he him self is reaping.

Poor old fool jackass medical profession (at least a certain part of it)! It sends its prescription to the drugstore, and wonders that the druggist gets the case. It rails against quackery, and yet indorses patent medicines. It speaks ill of charlatanry, and writes a testimonial for a "book for the laity." It says it is altogether disgusted, sick, and nauseated with fakes, and yet it sends its ocular sufferers to jewelers and druggists, to have their precious eyesight put in jeopardy, though competent specialists, who are licensed physicians with years of special training and experience, are not difficult to find in all the larger towns, as well as the cities, of almost every state. And then it complains. Yes, it actually complains! It raises up its foolish little, ineffectual voice, and cries out. And what does it cry out about? Why, it says that the *laity* does not appreciate scientific qualifications, and that it is always ready to get hand and glove with quacks.

SPECIALIST.

SUCCESS is only for those who are willing to stand by their standards—who are ready to endure the siege of misjudgment—who are prepared to face the fire of criticism and to accept defeat until they become vaccinated against it. Most men who gave up would have arrived if they had kept up.—Kaufman.

The Trained Nurse and the Doctor

Her relations to doctor and patient, and theirs to her: as presented, in the form of a symposium, at a meeting of the Thurber Medical Association, at Milford, Mass., Dec. 3, 1908

By J. M. FRENCH, M. D., Milford, Massachusetts

WHEN the program committee of the Thurber Medical Association met shortly after the annual meeting in October, to arrange the exercises for the coming year, the first meeting planned was a symposium on the "trained nurse." The immediate inspiration for this meeting lay in the fact that just one week following that date the training school connected with the Milford Hospital was about to graduate its first class of nurses, and that a considerable number of the members of the Association were also members both of the medical staff of the Hospital and of the teaching staff of the Training School. The members of the graduating class, consisting of five young ladies, were the special guests of the Association, while the Managing Board of the Hospital, and a number of other persons, both men and women, were present by invitation.

The Nurse from the Doctor's Viewpoint

The opening paper was read by Dr. F. T. Harvey of Milford and treated of "The Trained Nurse from the Doctor's Point of View." He declared that there exists between the physician and the nurse a sacred partnership which cannot be broken except by the withdrawal of one or both from the case. In the presence of dread disease all personal differences vanish and every thought and effort is concentrated upon the battle at hand. The one directs, the other executes. The one accepts the daily reports and observations and searches his books and his personal experience in order to formulate the plan of campaign, the other receives the orders, organizes the forces and conducts the battle.

What the doctor most admires in the nurse is her loyalty that impels her to stick by him through thick and thin, and this even when she may doubt the wisdom of his orders or the accuracy of his diagnosis; that loyalty which restrains her from voicing her doubts to the patient or his friends, thus preserving the confidence which is necessary to success and maintaining a discretion which leads her to come to him direct with friendly suggestions and criticism. No doctor who is a professional gentleman will resent such an attitude on the part of the nurse, and no nurse worthy of the name will betray the professional confidence of either patient or physician. If, however, the time should come when she feels that her conscience will no longer permit her to carry out the orders of the physician, she should frankly tell him so. If he persists, and she is still unconvinced, she should then give up the case; for when she ventures to change the policy of the doctor or by word or look destroys the confidence of the patient in him, from that moment she has assumed a responsibility for which she is not fitted either by education or experience. Besides, the doctor *may* be right.

The Education of the Nurse

Dr. Harvey closed by stating that a trained nurse's education should begin in the home of a father who has to work and a mother who knows how to economize. He claimed that every department of a training hospital should be run, and the work in all its phases done, by the undergraduates. Cooking is the first process in digestion, and not the means to pamper an abnormal appetite. Laundering is a chemical and mechanical process that requires to be mastered in a manner not possible to the raw and inexperienced recruit from the European peasantry. The physician is constantly studying the

means to prevent as well as to cure disease, and the nurse should be fitted to go into homes where ignorance has resulted in poverty and disease and there teach their cause and prevention. He would not demand that the professional nurse should do housework and the family laundry in the homes where she attends, in addition to her professional duties, but he did claim that she should be educated in these things and be able to do them well.

The next paper in the symposium was presented by the Rev. Webster Woodbury of South Framingham, on "The Trained Nurse from the Patient's Point of View." He was selected for this topic on account of his known familiarity with the work of the nurse from the standpoint of the patient as well as for his sympathy with and understanding of the subject from the viewpoint of both the patient and the nurse.

The Nurse a Protector

He defined the relation of the nurse to her patient to be one of protection. First, she protects from the ravages of disease. Second, she will protect the patient from himself.

The nurse will have a great compassion for that strong man wrestling with disease, anxious, and perhaps despondent as to the result. She will have compassion for the family, in their doubt, and confusion, and foreboding. She has the knowledge, so that certain symptoms that alarm the ignorant do not disturb her, though they may incite to increased diligence and watchfulness. She has faith in herself and her training and so is prepared for emergencies. This faith gives her self-control, calmness and dignity in the midst of the most serious alarms. This becomes the atmosphere which surrounds the patient and the household. And as a minister of the higher faith he could wish that every nurse might have faith in the Higher Power.

Third, the patient needs to be protected from those who love him best. In their anxiety they desire that every remedy suggested by outsiders should be tried. Unless something is being done all the time, they fear that not enough is being done. The nurse must have courage to come into the sick-room hopefully and restrain emotion; faith to wait the processes by which medicine becomes effective; and patience to wait through the tedious days which the disease must run.

Fourth, the nurse must protect the patient from the solicitude and the well-meaning sympathy of outside friends. The patient feels that it is only an act of courtesy to see each inquiring friend, business partner, church deacon and good Aunt Sabrina. Neither she nor the family are aware of the nervous strain caused by the most cheerful, nor the real debility created by the pained and suggestive looks of the doleful. It is one of the highest expressions of confidence when the physician can say, "If Rev. Mr. Jones calls, let him come in. He will stop but a moment, and the word he says will be better than medicine." Not all the clergy, and but few friends, can be thus trusted.

Sixth, the nurse must stand between the patient and the doctor, not as criticising or altering his treatment, but as noting whether the remedies administered or the doses used are producing the results he anticipates. Then there may be sudden and unexpected changes when his presence is imperative, and should be immediate.

The Nurse Must Never Gossip

In concluding, the speaker made the point that the nurse should be very reticent. She occupies the position of a father-confessor and must hide many things in her heart. The reputation of the home must be very dear to her. What is done or said there is not for the eye or the ear of the outside world. A nurse must not talk too much outside, and she must never gossip. He highly appreciated the element of self-sacrifice that enters into the calling of a trained nurse. She is not always appreciated. In some homes there seems to be a disposition to get all they can from her, regardless of the fact that she must have her hours of rest and that she craves sympathy, which is rest.

The closing paper of the afternoon was read by Miss H. F. Seavey, the resident superintendent of the Milford Hospital, and

presented the nurse's side of the case, under the heading of "The Doctor and the Patient from the Standpoint of the Trained Nurse."

Miss Seavey showed herself amply able to stand up for the nurses whom she had trained, and all others as well. She declared that the nurse has but two hands and two feet and is not different from other women. She enjoys the same things, has the same good qualities and the same faults as other women. But a great many people forget the woman in the nurse. They think all she needs or desires is to be in the sick-room day and night. But the fact is that nurses cannot work night and day any more than other women. Contrary to a frequently expressed opinion, she even works at her trade for the same reason that the majority of people work at theirs, not because she can do such a vast amount of good in the world, but because of the prosaic, everyday fact that she, too, has her responsibilities and cares and demands upon her earnings and is herself obliged to procure means to that end.

Loyalty to the Physician

A great deal is said about the nurse being loyal to the physician. Nine-tenths of the nurses are loyal to the physician, oftentimes more loyal than he deserves. When a nurse goes to a case and in a few days the patient and family are clamoring for a change of doctors, does the nurse side with them? Never! She is on the doctor's side always. No matter how big a fool that doctor may be, she lauds his skill, extols his virtues, and not only places him on a pedestal but keeps him there all the time she is on the case—and it is right that she should do so.

But what is the doctor's attitude toward the nurse when the family or the patient complain about her? Does he stand by her? In the language of the schoolboy, "Not much he doesn't." He immediately says, "Well, we must make a change at once." And that courageous man, who was afraid to stand up for the nurse, at the patient's bedside, is too timid to speak to the nurse himself and so gets some member of the family to do it for him—or the Superintendent, if the patient happens to be in a hospital. But superintendents, as a rule, have fairer judgment and seldom pay any attention to such doctor. It never occurs to this self-satisfied man that the patient who whines about the nurse, who takes care of her twenty-four hours of the day, does likewise by the doctor. Many and many a family would the doctor lose if it were not for the nurse's loyalty to him.

In closing, she said: "The physician often complains because the nurse talks too much about the ins and the outs of the profession. She does talk too much, it is an admitted fact. But the nurse is not the only one in the party who talks too much. I have been in the profession for several years, and I have found very few doctors who were tongue-tied."

Following the reading of the papers a general discussion ensued, in which all present, physicians and laity, men and women, were invited to take part, and a goodly number did so. Then supper was served to the members and guests and a social hour enjoyed. As illustrating the friendly relations existing between the members of the two professions, it may be said that only a few evenings previous the nurses of the graduating class—known locally as the "Herbs" class (from the initials of their names, Hobson, Elwell, Ruhan, Bain, Stark)—gave a dinner and entertainment to the doctors of the teaching staff and their wives, in order to express their appreciation of the efforts of the physicians in their behalf.

It is in such ways as this that the Thurber Medical Association endeavors to fill its place and do its work as a local medical society, not solely by meetings devoted to strictly professional study and work, but by working for "the promotion of comity and good-fellowship" among the members of the society, and also by showing an active interest in the welfare of the community, especially in the line of public health, and by laboring to bring about a better understanding and a more friendly feeling between the profession as a whole and the general public. Certainly the effort has been at least reasonably successful of late years in this community.

SURGICAL AND GYNECOLOGICAL NOTES

BY EMORY LANPHEAR, M. D., LL. D.

UTERINE TUMORS AND PREGNANCY

As a rule uterine fibromata or myomata should not be removed during pregnancy, the exceptions being appearance of pressure-symptoms or evidence of twisting of a pedicle or of sloughing of the tumor. At about the end of gestation, if it is plain that the growth is such as to interfere with delivery, it is advisable to perform cesarean section or a Porro operation, which latter is to be preferred if the tumor is one which demands hysterectomy—the living child to be delivered before the uterine vessels are ligated.

The attending physician should never permit labor to drag on for hours in these cases, in the vain hope that delivery may be effected in some mysterious way. Cesarean section is practically nondangerous if performed by a skilful surgeon upon a patient not already exhausted by tedious efforts at parturition or, worse, infected by manipulations through the vagina. Attempts to drag the child past an obstructing fibroid, by forceps, version or even embryotomy, are likely to be attended by damage irreparable; and of far greater danger to the mother than an elective abdominal delivery.

A point strongly to be urged in favor of surgical instead of obstetrical delivery is that in addition to its safety the abdominal operation permits removal of the offending mass at the time of delivery, cesarean section alone being rarely performed in such cases; unless the woman is in very bad condition the tumor (and generally the entire uterus) should be excised, thus completely removing all source of future danger.

PYELITIS DURING PREGNANCY

Women seem to be especially prone to develop pyelitis during pregnancy—a condition greatly to be feared. It is to be differentiated from pleuritis at the base of the lung in its early stages, and from appendicitis and typhoid later; but detection of pus in the urine clears up the diagnosis. Colon bacilli are most often the cause of the suppuration; constipation having much to do with their migration. Mild cases may be cured by absolute quietude in bed, thorough and repeated purgation and internal use of potassium iodide, alternating with urotropin or other urinary antiseptic. Those of more severe degree should have, in addition, hypodermic administrations of the vaccine made from the bacillus coli communis.

Very serious cases may demand incision of the pelvis of the affected kidney with drainage or nephrectomy—although the latter operation is regarded as a very dangerous procedure during pregnancy, and many authorities prefer to empty the uterus, permit recovery from this, and then do the necessary work through the loin. But if done under anesthesia from one injection of hyoscine-morphine with a little chloroform, even extensive operation on the kidney may be done by a quick and skilful surgeon.

INTERMENSTRUAL PAINS

Severe pelvic pain between menstrual periods may be the source of serious discomfort, especially to the highly nervous and anemic subject. Often it depends upon masturbation or sexual excesses as well as upon (perhaps most often) too oft-repeated irritation without gratification—as in the long-continued "courting" so common in this country; the pelvic congestion induced by amorous embraces being as productive of mischief as that due to displacements, stenosis and other causes generally enumerated.

Physiologic turgidity of ovaries and uterus should occur only at the menstrual period or during sexual excitement which is to terminate in the culmination of the act:

an orgasm, the nervous explosion of which relieves the hyperemia.

Some of these intermenstrual pains may be relieved by correction of unnatural congestions or by curing the obstinate constipation. Others yield to the use of potassium permanganate in doses of 1 decigram (1 to 2 grains) in capsule after each meal; it must be continued for many weeks, with brief intermissions now and then if the stomach becomes irritated. In the anemic, arsenic (generally in combination with iron—"triple arsenates" are ideal) will be found effective if the woman can be induced to live most of each day out of doors.

CYSTALGIA

A condition closely resembling neuralgia of the bladder is due to loosened kidney. Every patient, therefore, who complains of cystalgia should be examined for displaced kidney. Anchoring the loose kidney will, in such cases, relieve the reflex contractions of the detrusor and sphincter of the bladder, which are the direct cause of recurrent pain and oft-repeated disturbances of urination.

CHLOROFORM POISONING

Worth reports the successful treatment of a case in which a man had swallowed three ounces of chloroform. The stomach was washed out with warm oil, continued until no odor of chloroform was manifested. Artificial respiration was also employed until the man recovered.

MALIGNANT DERMOID CYSTS

One of the reasons for early removal of ovarian tumors is the possibility of a dermoid cyst taking on malignant change. When ovarian teratomata are removed, great care should be taken not to break the capsule as implantation of embryonal cells in other parts of the abdomen may lead to secondary growths of cancerous character.

::: DIAGNOSTIC NOTES :::

THE EXAMINATION OF URINE AND SPUTUM FOR TUBERCLE BACILLI

To increase from ten to twenty times the relative number of bacteria in doubtful specimens, Erlandsen and Ellerman stated before the Copenhagen Medical Society and quoted in *The Lancet*, 1908, page 601, the following technic: (1) 20 Cc. of suspected sputum are carefully mixed with 0.6 percent of solution of sodium carbonate, and kept at 37°C. for twenty-four hours. (2) The mixture is centrifuged. (3) Four parts of a 0.25-percent solution of sodium hydrate are added to the deposit, mixed and boiled for about half a minute. (4) The mixture is again centrifuged and a small part of the sediment stained as usual.

In the routine for urine a few modifications of this test must be made. (1) Obtain the centrifuged sediment of the urine. (2) Add four parts of a 0.25-percent solution of sodium carbonate, and from 20 to 50 centigrams of pancreatin. (3) Incubate this mixture at 37°C for twenty-four hours, and then treat as above for sputum examination, under 3 and 4.

THE DIAGNOSIS OF LUPUS VULGARIS

This is usually not difficult to the physician who has seen a good many cases, but occasionally it is not very easy to differentiate it from epithelioma and syphilis. Several points of value may be noticed in the differential diagnosis between these three affections. Lupus is nearly always a disease of early life, while both epithelioma and the eruption of syphilis which resembles lupus, are more likely to be seen after middle life.

The progress of lupus is much slower than either syphilis or epithelioma, the lupus globules are deeper and of a peculiar translucent appearance, readily breaking down; the ulcers of lupus are not so deep or so sharp-edged as those of syphilis. The discharge from the ulcers of lupus is much less in amount than that from syphilitic ulcers and does not have the offensive odor of the latter. The ulcer associated with epithelioma is usually a single lesion, with a hard, firm edge and very different in appearance from the globular masses of lupus. It is to be remembered, however, that epithelioma may develop upon a long-standing lupus.

The finding of the tubercle bacillus in the lesions and the reaction of the patient to tuberculin are positive diagnostic features.

ACETONE TESTS VITIATED BY FORMALDEHYDE

Michaud (*Deutsch. Arch. f. Klin. Med.*) found that diabetic urine containing acetone on being voided still gave positive reaction to acetone tests after standing twenty-four hours or more. If, however, formaldehyde had been added to the urine (as a preservative) the acetone tests were negative twenty-four hours later. Quantitative tests showed that this preservative had reduced the total amount of acetone seventy-five percent at the end of twenty-four hours. The amount of sugar was not influenced by the formaldehyde.

HEMATURIA AND HEMOGLOBINURIA

Dr. E. Davies, writing in *The Medical Era*, says that he has not lost a case of swamp-fever, or "black jaundice." His method of treatment is as follows: If there is hematuria he applies over the region of the kidneys a flannel cloth wet with a lotion consisting of aqua ammon. fort, dr. 1; tinct. lobelia, ozs. 2; spt. camphor., ozs. 4. Internally he gives the defervescent compound, containing aconitine, veratrine and digitalin, substituting strychnine arsenate for the veratrine in asthenic cases. He cleans out the bowels with calomel and podophyllin and renders them aseptic with large doses of the sulphocarbolates. If the skin is inactive pilocarpine nitrate is administered every thirty minutes in 1-67 grain doses to develop free perspiration and mucous secretion and relieve the congestion of the kidneys.

The treatment of hemoglobinuric cases is along the same general lines. Pilocarpine nitrate and potassium nitrate render particularly good service in these cases.

THE BLOOD FINDINGS IN GRAVES' DISEASE

Caro made a careful study of thirty-two cases of this disease with particular reference to the blood changes. In the more severe cases he noted a uniform marked diminution in the number of polynuclear leukocytes and an increase in the mononuclear variety. This increase in lymphocytes was also observed in atypical forms. Without exception this increase became more marked after the exhibition of thyroid preparations. The author regards this finding as being of considerable diagnostic significance.—*Berliner Klin. Woch.*, 1909, No. 39.

URINARY EXAMINATIONS IN TYPHOID FEVER

Dr. C. C. Marshall reports an interesting case in *The Journal of the American Medical Association* which shows the importance of the urine examination in cases of suspected typhoid fever.

The findings seemed to warrant a provisional diagnosis of typhoid, and the patient was instructed to save a specimen of the next morning's urine. It was examined and found loaded with bile. Further examination of the abdomen resulted in the discovery of a distended gall-bladder with localized pain and tenderness. The diagnosis of cholangitis was made, and the proper treatment resulted in the condition clearing up in a week.

The doctor adds that had the urine not been examined in this case the patient might easily have been treated for typhoid as there was no jaundice and the color of the stools

was not noted. Had this been done cholangitis would probably have developed, with serious results for the patient. This case should emphasize the necessity for the examination of the urine in all cases of typhoid or suspected typhoid fever.

::: THERAPEUTIC NOTES :::

AN ALKALOID FROM BARLEY

La Clinique reports some interesting experiments with hordenine, an alkaloid obtained from the barley plant, and used by Mercier and Pepin in intestinal affections.

ALCOHOL

Alcohol is a pathogenic agent, and as such is not a fit daily beverage for anyone, and neither distillery nor brewery logic will ever again reinstate alcoholics as proper dietary or prescription preferences, save under the most cautious limitations.—C. H. HUGHES, *Alienist and Neurologist.*

AESCULIN IN HEMORRHOIDS

Arthault has successfully applied an Indian species of chestnut for hemorrhoids. He calls it a specific. We are not surprised at this, since it contains the glucoside æsculin, to which we have repeatedly directed attention. Commenting on this, the *Druggists' Circular* says: "Doubtless this work will redirect attention to the usefulness of æsculin in the treatment of hemorrhoids."

TUBERCULIN IN BONE AND JOINT DISEASE

In *The Cleveland Medical Journal*, Stern advises the use of tuberculin in minute doses in the treatment of tuberculosis of the bones and joints. He uses from 1-1000 to 1-10,000 of a milligram of Koch's tuberculin, taking as a guide for the size of the doses, the intervals of the doses and the increase of the amount of the doses, every objective and subjective symptom of the disease. Like Wright, he avoids all reaction of any kind, the principle of treatment being artificial immunization. The average duration of the treatment is nine to twelve months. The usual antituberculous measures are also employed. Dr. Stern's paper contains a report of thirty-seven cases; with one exception all these went on to satisfactory improvement without complication.

STROPHANTHIN

Catillon warns against the administration of strophanthin intravenously, four deaths having occurred in rapid succession. This offers another proof of the excellence of the Burggraeve method of administering remedies. When minimum doses are repeated at the proper intervals, poisoning, much less death, is an impossibility. The effects of the drug are known and are watched for.

ECLAMPSIA

Heimann reports the case of a boy five months old, with bronchopneumonia, who developed eclampsia. Baths gave only temporary relief. Then 1-10 milligram of atropine-methyl-bromide was injected hypodermically, and the attacks ceased almost at once. Next day he required two similar injections, with which the convulsions stopped permanently.—*Monthly Cyclopedia.*

INTERNAL HEMORRHAGE

In *The Medical Record*, April 3, Thomas F. Smith contributes an important paper on the above topic. His suggestions in regard to treatment are:

To lower blood pressure he administers glonoin. For extremely rapid pulse of low tension, brandy, ammonia or ether. For marked nervous symptoms, morphine. Laparotomy and repair of the damage. To replace the fluid loss and to create peripheral resistance, raising blood pressure and stimulate the heart, adrenalin chloride, ergot and physiologic salt solution. If the respiration is impaired, strychnine.

The calcium salts should not be continued for more than twenty-four to forty-eight hours, as they actually decrease the coagulability of the blood if given for a longer period. His own experience with calcium has been disappointing. In regard to gelatin it is indeterminate.

GONORRHEAL ARTHRITIS

This disease has long been one of the most unpleasant of the *opprobia medicinæ:* the martyrdom and despair of both patient and physician. And though, since acting upon the suggestion of Dr. William F. Waugh of Chicago—an astute observer and thoroughly practical physician—and "saturating" our patients with the sulphides of calcium and arsenic, our results have been better than previously, we still come across patients who have run the gamut of all the preparations of the United States Pharmacopeia, National Formulary, New and Non-Official Remedies, ethical and nonethical proprietaries, nostrums and common patent medicines, and without the slightest results (except that of ruining the stomach).

Such a case was that of Mr. B., who besides using numerous remedies of the classes indicated, was also subjected to electricity, Turkish baths, hot air, passive hyperemia, and osteopathy. These treatments did not make him any better; the last—osteopathy—made him distinctly worse. When he came to us, we tried for a week very large doses of calx sulphurata and arsenic sulphide, and inunctions of unguentum Credé, but the results were practically *nil.*

We then decided, as a last resort, to try the gonococcus vaccine, or Neisser-bacterin (Mulford). Without going into the details of the case, we will state that after the use of eight injections the patient was able to walk freely, stated that in three years he had not been so free from pain, and the swelling of the knees and around the ankles was almost completely gone. We administered three injections of 25 million gonococci each, and five of 50 million each. At no time was there any appreciable local or constitutional reaction. No other remedies whatsoever were employed.—W. J. Robinson, *Am. Jour. of Urology.*

POTASSIUM BICHROMATE AS A CANCER CURE

In *The British Medical Journal* for March 6 James Fenwick describes twenty-two cases in which various forms of cancer were successfully treated by the use of potassium bichromate. The dose was seven to fifteen minims of a saturated solution, which was injected into the growth. In cases of rodent ulcer the solution was applied to the surface with excellent results. In some cases a ten-percent solution was employed. The injections were attended with considerable pain, which was, however, successfully anticipated by the previous administration of an analgesant. The injections were given about once a week, although the author does not speak definitely on this point.

PILOCARPINE AND THE LIVER

Goyon and Kareff state that pilocarpine lessens and suppresses the glycogen of the liver. When given in full doses it increases the urine and pancreatic secretion, but not the celluluar secretion of the latter. The increased activity Delezenne explains as due to the increased presence of leukocytes in the secretion. Pilocarpine injected intravenously decreases the glycogen of the liver, and increases the glucose in arterial blood.

PHYSICIAN MORE THAN CLIMATE

I have always maintained, when my advice has been sought as to the wisdom of the patient going away from home or to

some particular climate, that it was absolutely essential to the recovery of the patient that he be under the care of a man who thoroughly understands the treatment of disease. —R. H. Babcock, *Lancet-Clinic.*

UNTOWARD ACTION OF IODIDES CORRECTED BY ARSENIC

Iodides, as is well known, set up in some patients all the symptoms of a cold in the head, even in small doses. Changes in the mouth, such as enlargement of the tongue, dribbling of saliva, etc., are occasional unpleasant symptoms. Difficulties in this way may frequently be overcome, according to D. M. MacDonald, by giving small doses of arsenic simultaneously.—*N. Y. Medical Journal.* [Why not employ arsenic iodide and get all the advantages from one remedy? —Ed.]

DROPS AND MINIMS

It is a common error to presume that the drop equals the minim, at least for ordinary clinical purposes. Note the following table:

Number of Drops in 20 Minims of these Important Medicaments

Acetic acid	40	drops in 20 minims
Hydrocyanic acid, dilute	15	" " " "
Muriatic acid	18	" " " "
Nitric acid	28	" " " "
Nitric acid, dilute	17	" " " "
Sulphuric acid	30	" " " "
Sulphuric acid, dilute	17	" " " "
Ether	50	" " " "
Fowler's solution	19	" " " "
Oils, essential	40	" " " "
Tinctures	40	" " " "
Vinegars	26	" " " "
Water, distilled	15	" " " "
Ammonia	18	" " " "
Wine antimony	24	" " " "
Wine of colchicum	25	" " " "
Wine of opium	26	" " " "

This may be taken as a fair average, as dropped from a given vessel, but the drops will be found to vary owing to the vessel from which they are dropped, owing to the size and contour of the flange or edge.

A little study of the table above may reveal why one sometimes fails to get the effect expected from a given dose, or why one cannot get constant results from a given drug.

Make a copy of this table and paste it close to your dispensing counter.—*The Medical World.*

ELECAMPANE

Elecampane has been found very useful in bronchorrhea, humid asthma, renal catarrh and leucorrhea. Doing this local work it improves the general tonic conditions of the body. It is a good remedy in night-sweats. Helenin, the active principle, is said to have a fatal action on the tubercle bacillus.—Fearn, *Ellingwood's Therapeutist.*

SYPHILIS

Bartholomew, in *The Lancet*, describes two cases of syphilis treated by arsenic salts. These showed marked influence over the course of the disease. He concludes that there is no doubt that in certain cases mercury loses part if not all of its specific power, and in these cases we appear to have a valuable means of cure in the arylarsonates. [I have practised a good many years, and have found no remedy or combination nearly so effective, or so prompt, in syphilis as that of arsenic iodide and mercury biniodide, one milligram each, iodoform and phytolaccin or stillingin, one centigram each.—Ed.]

ARSENIC AND ANTIMONY VS. TRYPANOSOMES

Cushny found the trypanosomes of sleeping sickness affected by arsenic, antimony and bismuth, either one in proportion of 1 to 200,000 banishing the parasite. Arsenic acted more slowly than antimony. With bismuth the damage done to the host was reparable; the parasites were not permanently destroyed, but in course of time returned. As often as they were banished they returned at shorter intervals, until a race of antimony-resistant or arsenic-resistant trypanosomes was developed, which, retaining this quality, could be propagated from rat to rat. The arsenic-resistant parasite was still susceptible to antimony or

bismuth; and *vice versa;* and in this might be found a modern indication for the use of the old-time polypharmacy. In a patient treated at once with all the drugs available few trypanosomes survived the combined attack.—*Merck's Report.*

OPIUM POISONING

Dholakia, in *Practical Medicine,* contributes an interesting paper on "Opium Poisoning." An opium-eater, who was accustomed to take daily fifteen grains of opium, one day took a second dose of the same quantity, and died forty hours after the second dose. A young husband, instigated and aided by his cruel mother, forced his poor obedient wife to take opium simply to stop the incessant quarrels going on between the innocent wife, mother and sisters.

Child homicide is often committed by females through sheer revenge or jealousy. Most suicidal cases occur early in the afternoon or late at night. The man returns from his work at noon with some anxiety, or has a quarrel in the house, takes his half-hearted hurried meal, and retires under the pretense of taking a little rest or sleep, where he is found under the influence of poison. Deliberate suicides may occur late at night in bed.

CELLASIN

Dr. A. D. Barr has succeeded in producing a new ferment known as cellasin. This product is the result of an investigation including a great variety of yeast and fungus growths, under many changes of environment and nourishment. The best results were obtained with mucor racemosus and with yeast, by successively changing the environment and food, through a long period of time, until the final growth is distinct both in appearance and habits from the one used in the beginning. This final growth is then treated to destroy the cells and liberate the enzyme, and this is the product known as cellasin. This substance exerts its ferment power in the blood and tissues as well as in the intestinal tract. It is not injured by the acid gastric juice. We infer that this is apt to prove an exceedingly valuable remedy in the treatment of diabetes, as well as in chronic malnutrition.

SMALL-DOSE MEDICATION

Our homeopathic and eclectic friends have done a vast field of work in therapeutics it is a shame we know so little about. We have lost the art of using drugs for their indications in small doses. Full physiologic doses of medicine do harm if long continued, and the average four-ounce prescription continues such drug-action altogether too long, and often does positive harm.

My idea is to give a few doses of this character and to continue the medication with small doses of mild and kindly acting drugs that do not mask symptoms and do not overwhelm the system with a lot of foreign matter, placing an unnecessary stress upon the vital powers. One cannot succeed with small-dose medication unless he goes to the trouble to really inform himself as to the detailed action of his drugs and to study each individual case carefully.

The senseless plan of combining a half dozen drugs in one mixture has neither rhyme nor reason to commend it and is bad practice. We are using too many combination tablets. The whole matter has been fogged very largely by the propaganda for the National Formulary, a truly wretched compendium of shotgun mixtures rich in alcohol and sugar.—Blair, *Medical Summary.*

SANGUINARINE IN BRONCHITIS

Pfluger, in *Ellingwood's Therapeutist,* recommends sanguinarine in doses of two milligrams every four or five hours for acute exacerbations of chronic pharyngitis. It also improves defective hearing, especially if due to eustachian catarrh of a year's or longer standing. This alkaloid should be used more.

Calcium Sulphide in Furunculosis

One of the most common uses of this valuable internal antiseptic, exemplified in the practice of the French dosimetrists, with reports of some interesting cases

IT is a good while now since dosimetrists (and alkalometrists in America) began to use calcium sulphide as an internal antiseptic of the organism. It has always proved efficacious in various infectious diseases when generally employed either in preventing the formation of toxins or in facilitating their elimination. But it is not the purpose of this article to speak of the general use of the remedy.

In a previous article the author wrote of the happy effect of this remedy upon the metallic intoxications with lead and mercury. The subject of this article is to be calcium sulphide and its service in furunculosis.

It is said that furuncles vary according to their mode of propagation. If secondary furuncles appear for some time after the initial one, it may be admitted that they are the product of microbes coursing in the blood, producing a general infection of the organism. Is this thoroughly proven? The author thinks that in many cases there is nothing so uncertain as this. May we not just as well admit that secondary furuncles are produced directly by an infection of the skin as was the first one and not at all by pus coming from this first, say by simply coming in contact with a contaminated object? When the furuncles appear in the vicinity of the primitive lesion there would be no question but that these were secondary and local.

Whatever the mode of dissemination and propagation of furuncles, nothing is more true than that furunculosis is a most painful affection, frequently most obstreperous, and at times not yielding to either the best-made dressings nor to the observation of the most faultless cleanliness. Its infectious nature certainly admits of no doubt.

In this as in many other diseases we must take into consideration the soil in which the disease is growing. A soil which is resistant may have but one furuncle, while another soil, which is not resistant, may bring forth a long series of them, and there will be nothing to which to charge it. Do we not know that diabetics are particularly liable to them?

I remember having had at one time a regular battle with a veritable epidemic of furuncles in a batch of young fellows. It came about as follows: In an unusually large class of students there was one who had, as he said, a small white sore on one of his fingers. He used a towel taken from a washstand used exclusively for pus-basins in opening and dressing purulent sores. Soon after this almost all his comrades were infected after him, the linen in their room not being changed more than once in twenty-four hours. Most of them had their furun-

cles on the fingers, others had them on the wrists, still others in the nape of the neck where the microbes had been carried by the hand. I treated these different patients, as was usual at that epoch, with wet carbolized compresses and carbolized sprays. Some patients had but a single furuncle, but others had renewed crops for a longer or shorter time.

When I became conversant with dosimetry I added to the surgical treatment with wet compresses and sprays (which at times are indispensable) the dosimetric treatment with calcium sulphide granules. I also made use of various kinds of beer-yeast, fresh and dry, or in absence of these, bakers' bread-leaven. However, I found all forms of yeast unsatisfactory. But the calcium sulphide never disappointed me.

Before giving my observation in a case in which the furuncles could not be suppressed until treatment with calcium sulphide was instituted, I wish to relate how I came to employ this reliable remedy against all kinds of infection.

In the Orient, notably in Indo-China, the aborigines use sulphur not only as a purgative but as a general antiseptic blood-purifier.

Quite recently I read an article by Dr. Barth, in the *Journal des Praticiens*, in which he discusses the antiseptic properties of sulphur. He recommends sulphur in the form of ointment for antisepticizing the nasal fossæ as follows: "Employing sulphur ointment morning and evening tends to keep the nasal fossæ open, softens the mucosa and seems to exercise a real bactericidal influence upon the extension of the nasopharyngeal cavity. Yet it is never irritating, does not provoke any hyperesthesia or exaggerated secretion, which latter is the great objection to the use of boric acid, camphor and menthol and other fashionable antiseptics. The sulphur ointment can therefore be used for a long time."

This bactericidal action of sulphur on the nasal mucosa is only a specialization of its action on the mucous membrane generally. Ichthyol similarly owes its peculiar action to the sulphur it contains.

Dr. Robert Tissot excellently sums up the question in his reply to Dr. Barth as follows: "You believe in the action of sulphur on the nasal mucosa. Have you any reason for believing that the other mucous membranes of the body are insensible to this influence? If, as I think, there are no such reasons, if moreover many hundreds of physicians tell you that for more than thirty years past calcium sulphide dosimetrically administered never provoked either minor or grave conditions, do you then refuse to try it? The calcium sulphide is an antiseptic for not only the nasal but the intestinal mucosa as well, by its partial transformation into hydrosulphuric acid (sulphureted hydrogen); it is also an antiseptic for the pulmonary and laryngeal mucous membranes."

Beside the advantage of being in granule form and chemically pure, calcium sulphide readily gives rise to free sulphureted hydrogen. To produce general antisepsis with sulphur alone would require a quantity sufficiently large to produce troublesome diarrhea before antisepsis could be effected, and hence this substance could not be taken for long.

Calcium sulphide effects cures in all skin diseases, even those where everything else has failed. We may therefore expect success with it in furunculosis. Taking calcium sulphide as the dominant in the treatment of furunculosis, that is, as the remedy which must be given during the entire course of the disease, other medicaments may be needed on occasions, especially as the peculiarity of the individual case may demand. If the patient is depressed, if he has no appetite, it will be necessary to give strychnine as a vital stimulant, quassin for the appetite, and arsenic as a tonic; also an effervescent saline laxative if there is constipation.

Following I give the history of a case of furunculosis in which the rapidly beneficent action of calcium sulphide is well demonstrated.

On April 20 I saw Madame B. for the first time. She had then been in bed with fever for nearly three weeks. Her appetite

was gone, her tongue was heavily coated; her physical condition was very badly affected generally. In the right hypochondriac region were five or six furuncles, one of these approaching the size of her fist. There furuncles had been opened and their contents partly evacuated. Other furuncles were springing up around the first ones. Some of them were small, while others showed by their inflamed condition that they were on the way to reach the size of the original ones. There were more furuncles forming on the right thigh and buttock. The urine showed no sugar on examination.

Some time before this Madame B. nursed her husband for a carbuncle of moderate size on the nape of his neck. The carbuncle presented no particular features. It was cut open and covered with moist dressing. It healed rapidly in spite of the unavoidable friction due to its situation. The wife became infected while making her husband's dressings. About eight days after that a small furuncle appeared on her left cheek, and a little later another came in the right hypochondriac region and attained the size of her fist. I repeat that the lady was very much depressed when I saw her for the first time, and that not only on account of the number of furuncles, which betokened her bad condition generally, but also because of their location, which made it difficult to keep the dressings in their proper place. Then, also, she could not sit up, while the recumbent position was painful. The patient was very much affected because of the probability that when some furuncles disappeared others would spring up again.

And, yet, the treatment she received was the most logical and painstaking conceivable. The first furuncle, which was very large, was cut open and carefully washed out. All the other furuncles were treated in the same way. They were sprayed with carbolized water several times daily and were kept covered with frequently moistened cloths. She took quinine sulphate in cachets, beer-yeast, and a socalled tonic and fortifying wine. Nothing did her any good. New furuncles were continually added to the old ones. It was at this point that I had recourse to calcium sulphide.

On April 21 the patient got a supply of calcium sulphide and began to take fifteen granules per day. During the first days I also added strychnine arsenate, two granules, before two of her principal meals. I continued the moist dressings and the carbolized-water sprays. Five days later the condition of the furuncles improved and, what was remarkable, no new furuncles formed. On the left buttock there was a yellowish spot threatening to develop a furuncle, but it failed to do so. Soon her appetite returned, and the general condition changed for the better. I continued the calcium sulphide but reduced it to eight granules per day. I stopped the moist dressings and substituted for them a powder composed of equal parts of salol and finely pulverized talcum. A few days after that I stopped all treatment except the calcium sulphide, which I ordered continued to complete the asepsis of the organism.—Dr. Pigeaud, in *La Dosimetrie*, February, 1909.

THE INTESTINAL FLORA: INTESTINAL PUTREFACTION

Eli Metchnikoff has contributed an important article, to the *Annales de L'Institute Pasteur* (Dec., 1908) on the subject named in the heading. Whether we agree with the author in all his biologic and bacteriologic views or are fearless enough, for good reasons, to disagree with some of them, the greatness of this man's learning and of his powers of penetrating observation compel attention from every studious physician, and The Gleaner hopes his readers will be gratified with this gleaning.

Metchnikoff affirms that we are as yet altogether too little informed about either the normal or the pathologic flora of the intestinal canal. He therefore undertook its systematic study, being of the opinion that only a protracted study alone would be able to solve the problem of the etiology of the greatest part of the diseases of the digestive

tract. In this preliminary article he limits himself to the putrefactive bacteria alone.

Among these last the proteus, a putrefactive bacillus, although it is an aerobic bacillus, does not seem to play an important part in the intestines, for we do not meet with it there when they are in a normal condition.

Under the same circumstances, however, we can, on the contrary, isolate a number of anaerobic putrefactive microbes. Among these there is, first of all, the bacillus putrificus, which is present in the contents of the healthy human intestine and multiplies rapidly, after death, in the cadaver. Next comes the bacillus sporogenes, a microbe belonging to the type of septic vibrios and which is found in the contents of the intestines not only in the form of spores but also, and most generally, in its negative state. The presence of these two agents in the normal state of the intestines has been much discussed in the past. This, however, is not the case with the third agent, the bacillus welchii (the bacillus perfringens of Veilon and Zuber), which is recognized by all authors as a habitual lodger in the intestines.

The fact, therefore, that there are found putrefactive intestinal microbes belonging to three different species is no longer to be doubted; the only question being about the pathogenic part they play. So far as the bacillus perfringens (bacillus welchii) is concerned, we know that it has been found in the pus of certain cases of appendicitis. Its virulence is extremely variable, but it can easily be intensified. Every attempt that Metchnikoff made to produce appendicitis artificially in the chimpanzee failed nearly every time (15 failures in 16 attempts).

As to the bacillus putrificus and bacillus sporogenes, which appear in the normal intestines, their pathogenic power in respect to animals seems but little evident.

More important is perhaps the question about the toxic power of these putrefactive bacilli. The experiments on this point made by Metchnikoff showed him that implantations made with the agents in question in a medium of macerated meat may produce some body very toxic to the rabbit. The degree of the toxicity, then, is very variable, depending on the individual specimen examined and does not correspond with the original source. Such was the case with the bacillus of Welch which was isolated from a case of appendicitis, being almost wholly harmless as compared with other specimens of the same microbe coming from a person in good health and which caused the rapid death of animals.

From the first series of observations Metchnikoff concludes that in the putrefactive bacilli in our digestive canal we have a source of autointoxication against which the organization has to fight with all the means at its command. The intestinal putrefaction corresponds simply to the first appearance of putrefaction outside of our living organism. It is interesting to notice, from this point of view, that it is precisely during the first days of the development of anaerobes that their products are the most toxic.—*La Medicine Orientale*, 1909, p. 134.

HEMOLYTIC ALKALOID OF SCLEROSTOMUM EQUINUM

This parasite of the horse, one of the Nematodes, contains, according to Th. Bondouy (*Compt. Rend.*, 1908, p. 928) a crystallizable alkaloid of strong hemolytic power. There were extracted from the pulp of this parasite free fatty acids, alkali soaps, and strongly hemolytic substances. The latter, obtained after the removal of mucin, albumoses and xanthin bases, was in the form of a citron-yellow oil which after standing in the exsiccator for some days changed into a crystalline mass. The watery solution of this mass gives precipitates with the usual alkaloidal reagents, as for instance with picric acid it yields a picrate which reduces gold chloride in the cold.

A Reminiscence of the Physician

A confidential talk on the value of close observation, and how the lack of it on the doctor's part has led to curious and costly errors. A few stories relative thereto

THE three indispensable requisites of the physician are observation, deduction and knowledge. If the physician is deficient in one or more of these, he has missed his calling, and he would confer an honor upon the profession if he were to drop out and take up some other calling.

In his article on "Dispensing vs. Prescribing" (CLINICAL MEDICINE, October, 1908, p. 1351) Dr. Ringer has put this principle of observation and deduction clearly to a medical student who boasted: "I am about to be graduated from the best medical college in the United States. It is the best, for the reason that we treat all diseases by their symptoms."

1. "How would you treat a crying baby with the mother near to hysterics?" No answer. The removal of a diaper-pin cured both the baby and its mother.

2. "The patient has a violent earache which begins at a certain hour of the night, continues for a definite time, then disappears as suddenly as it came. This being repeated three nights in succession, what is your treatment?" No answer. A tooth was extracted; however, it might have been treated, which would have been just as curative and less painful.

The student refused to hear the third question, and he was the loser by it. His smattering of knowledge of the classical diseases was most useful and important to him, but its degree of greatest usefulness would depend directly upon his ability to apply it in its proper place. When knowledge is misapplied it is just as bad, if not worse, than no knowledge at all. Hence, knowledge gained through observation and deduction is just as important as book-knowledge. I would rather be treated by the poorest doctor on earth for the right disease, than by the highest authority in the world for the wrong disease.

The doctor is measured by his ability to observe, while the authority is measured by his ability to compile. The doctor should always place a premium on his own reasoning powers, and not on his ability to quote authorities. He should cultivate the habit of using his eyes, his ears, his sense of touch, and his bump of perception. He should observe the facts, then collect the data, and adopt that theory which explains the facts. Through the adoption of these means the discrepany between theory and practice will vanish, and the doctor becomes more useful by virtue of his ability to reason from effect to cause.

A student used to sit in the ampitheater and diagnose the diseases of patients brought into the surgical clinic. Occasionally he made a mistake, but it was not often; when he did, he would say that he had an excuse, as his means of diagnosis was limited to inspection. Most frequently his diagnosis was

confirmed by the professor, and by the findings at the operation.

In the following instance the discrepancy perhaps can be explained by that feeling on the part of the professor which has been compared to an "empty barrel." The time was at a clinic after the professor had poured forth his extensive knowledge of books, through a liberal or profuse flow of adverbs and adjectives, in a highly emphasized and important lecture on inflamed hernia, which the student correctly diagnosed as one of the final examination questions.

"What is your diagnosis of that case?" asked the student of the fellow who sat near, when an anesthetized man was brought into the surgical amphitheater for an operation that presented a remarkable enlargement of the scrotum, which distended the inguinal canal equally and extended to the external abdominal ring.

"I don't know, wait and see," was the curt reply.

"Well, I will say that it is a hydrocele. The scrotum is too large for it to be a hernia."

They did not wait long till the professor began with—

"Gentlemen, we have here before us just that condition of things which I have been emphasizing and urging upon you in the didactic lectures. I am glad, at this period of the course, after having lectured to you upon it, to have the opportunity to present before your eyes such a formidable picture of an inflamed hernia, where an operation is imperative and where delay would be fatal and inexcusable. This is a condition which everyone of you should be able to diagnose, and not one of you should be permitted to practise until you are able to recognize it."

Having finished his speech the professor took up the knife to make the incision. A little laugh went around the boys at the student's mistaken diagnosis.

"Don't you see," said one, "that it is always better to wait?"

"Well, the diagnosis was made by observation only—but, do you see? Look at what has happened."

The professor's initial incision was deep enough to open the sac, and the hydrocele fluid had spurted three feet into the air. The professor and assistants had jumped, and were looking at each other with awe. The professor was humiliated, unnerved and unspeeched; but with trembling hand and blushing face he stuck to his task until he had finished the radical operation for hydrocele. The student scored and the laugh ceased.

"Hum," said one, "medicine is all a fake. The professors themselves make mistakes. They can't always tell."

"Sure," said another.

At our next lecture the professor had regained his speech and he told us his mistake was inexcusable. He had not made a diagnosis of the case at all, he had not examined the patient, and the diagnosis given was that of the staff. The staff was composed of doctors of one year's experience, and the excuse was rather poor for a professor of surgery to give, but, of course, it was better than no excuse. But, the fault was with the professor. He had not trained his powers of observation and deduction.

That student is a physician. On one occasion he was called to see a patient who had been overcome by illuminating gas. The patient was a woman, 52 years of age, and the wife of a carpenter. She was in the habit of always locking her door whenever she was in her room. She was a new tenant in the house, accustomed to the use of gas, and had been engaged in cooking on a gas-range prior to coming to this place. A little two-burner gas-stove for light housekeeping was given her. This was connected to the gas-bracket by a rubber hose, where the gas-inlet was controlled by the main stop-cock. The gas-outlets in the burners were also under the control of two stop-cocks.

At about 11 o'clock Sunday morning the woman had cooked her breakfast and had turned off the gas, as was her custom in cooking on the range, by closing the two stop-cocks leading into the burners. Expecting one of her lady friends to call in the afternoon, and feeling weary, she lay down

to rest with no thought of going to sleep. The lady friend came and was told to go up to her room and knock. She did so, but no answer. She could smell the gas and called attention to it. The door was broken in and the woman was found unconscious. The door and window were thrown open and a dentist at the place commenced artificial respiration. The friend called her physician, and someone went for the police. The dentist's work was interrupted by the police, who carried the patient to a hospital in the patrol wagon.

At the hospital the staff was told by the officer of the law that the woman was found with a tube in her mouth inhaling the gas, and that the dentist had given her morphine, which accounted for the slight contraction of the pupils. The officer was waiting for the staff's diagnosis of alcoholism, when the physician arrived. The patient was on a table in the accident-room, surrounded by the staff and nurses. One was at her head, another at her side, two at her heels, and another with a history sheet asking her how it happened and what she had done it for.

"What is it? What do you mean? What has happened? How did I get here?"

"What did you take that gas for?" asked the youthful interrogator.

"What gas? There is no gas in me. O let me up! There is nothing wrong with me. Let me go. Ouch, you are hurting me."

"Well, lie down there or I'll hurt you worse than that," said the man at the head. "Oh, you are cruel," said the woman, as he placed his hand over her mouth.

"Is it alcoholism?" asked the officer of the history-recording doctor of one year's experience.

"It is probably alcoholism," was the pompous reply.

The physician had seen enough, and it was sufficient for a diagnosis. Who had ever seen a patient restored to consciousness after an attempt at suicide that didn't say: "Oh, doctor, let me die! I'll try it again the first chance I get. I have nothing to live for, and I don't want to live." Don't the doctors always have to touch the vanity of the patient, especially if she is a pretty actress, by such comforting assurance as:

> "It is better to endure the ills we have
> Than to fly to those we know not of."

"You are young; you are fair and pretty; you have a long life to live, with everything to live for. You are too pretty to die."

"But, Doctor, you don't know all. This man has ruined my life."

"Then, my dear woman, let him go. You are young, and you may find many men who are better than he. Don't you think that you are just as good as he?"

"Oh, yes, but people don't look at it that way."

"Yes, they do. Our lives are shaped by our environment. Don't throw yours away for him."

"All right, then, Doctor, I'll do as you say."

So ends that story. Now listen to the dialog in our case.

"They have been trying to tell me that I took illuminating gas," the woman said to her physician, "but I did nothing of the kind. I turned the gas off myself."

"But you turned it on again," said a smiling nurse, "for your door was locked."

"She is just as delirious as she can be yet," said the resident physician, "and after giving her all of that morphine."

"I did nothing of the kind," the woman responded. "There is no gas in me, and I want to get out of here. Doctor, won't you take me out of this place? You know I am always careful with the gas, and you don't think that I attempted suicide, do you?"

"No, but there is a mistake somewhere," the doctor said. "Still, you will have to stay here tonight. You are in the hands of the police and I can't take you out. So get in bed, give the nurses no trouble, and I shall come down to see you tomorrow."....

"Gee! but it was fierce the way they treated you when you came to the hospital," said the woman the next day, while going home after she was dismissed.

"Yes," was the doctor's reply. "But it would have been all the worse for you if I hadn't come. The officer has told two lies

in order to get these young doctors to say that it was alcoholism, so he could take you to the station house and have you fined for being drunk. The first lie was that the dentist had given you morphine, and the second was that you were found with a tube in your mouth, inhaling the gas. Both are infamous lies. But no doubt he will be promoted for his excellent service before long. Listen: *The Baltimore Sun*, Oct. 5, 1907, gives the following account:

'LOCKS DOOR; TURNS ON GAS

MRS. FREDERICK J. LEIGH RECOVERING AT THE HOSPITAL

Mrs. Frederick J. Leigh, 52 years old, attempted suicide yesterday at ther home, 623 W. Lexington St. She locked herself in her room in the front of the third floor and turned on the gas. She was discovered about 4 o'clock by Mr. John J. McGee and Mrs. Mollie Knight, who, detecting the odor of gas, forced open the door. The patrol-wagon was summoned and she was taken to the University Hospital, where, after an examination, one of the physicians pronounced her suffering from acute alcoholism in addition to the gas poisionng. The physician also said she would recover. Dispondency is thought to have prompted her action. Mr. Leigh, her husband, is said to be in Bremerton, a suburb of Washington.'

"Further, *The Baltimore American* of the same date gives the following report:

'MRS. LEIGH FOUND UNCONSCIOUS

Mrs. Jennie Leigh, aged 52 years, was found unconscious in her room at the boarding house conducted by Mrs. Mollie Knight, of 723 W. Lexington St., shortly before 4 o'clock yesterday afternoon. The gas was turned on. The woman was found by Mrs. Knight and John J. McGee, a boarder. Mr. McGee burst open the door at the request of Mrs. Knight, who had smelled gas in the hallway. Mr. McGee and Mrs. Knight entered the room and found Mrs. Leigh in bed. She did not answer when loudly called several times, and Patrolman Teeves, of the Western district, was summoned and he had the woman conveyed to the University Hospital in the Western district patrol-wagon. She was attended by Dr. F. W. West, of the hospital staff. She was revived but would make no statement. Mrs. Leigh has only been living at the hospital since Saturday, having presumably come from Bremerton, Wash., D. C., where her husband, Mr. Frederick J. Leigh, resides.'

"My, isn't it awful! I think I shall not write Fred anything about it. He'll not hear of it away out there at Bremerton. Why, they didn't know where it was at. They had never heard of such a place."

"Well, here is the stove. Both stopcocks controlling the burners are turned of. Of course this one here at the bracket was turned on. Are they just as you left them?"

"Yes, I am sure they are. I turned those two off. That one I forgot to turn off. I am quite sure that is how it happened."

The above facts have been verified by a subsequent incident of the same kind. I believe that half if not two-thirds of the cases of "suicide" by illuminating gas, as reported by the police, are due to like accidents. The police know that the one-year graduates of the hospital staff are easy-marks, and they can get from them just what they want. Hence they hustle every case off to the hospital as their surest hope for increasing the number of fines, in order to work out their own promotion.

The question, "Is it right?" comes up, but we have no room for it here. We shall leave justice to those who desire it. Many a case of carbolic poisoning might be saved by calling in the nearest doctor, instead of allowing the police to call the patrol, and cart the patient off to a hospital, where so much time has been consumed after taking the poison that the patient dies before medical aid can be given.

The promotion of a police officer is a poor symbol by which to weigh a human life, when the two are placed in the balance.

L. B. EVANS.

Baltimore, Md.

APIOL IN AMENORRHEA

In the days when I prescribed and prescriptions were frequently refilled without my permission I had three cases which proved that Bartholow's statement was correct concerning apiol, namely that this drug is safe even in pregannecy and does not tend to cause abortion.

Case 1.—Married woman, aged 29 years, with vicarious menstruation, torpid liver and chronic indigestion, accustomed to vomiting blood before and after menstruation. Apiol had been prescribed for menstrual conditions and greatly benefited her. Two months later she became pregnant,

but took apiol for two weeks before she came to consult me, I then directed her to stop taking it. Examination then showed that the ovaries were not congested but everything was in a normal condition. She gave birth to a fine boy at full term.

Case 2.—Married woman, aged 25, with incipient nephritis; otherwise healthy, excepting for dysmenorrhea. Apiol had benefited her when I first prescribed it and she had the prescription refilled without asking me. This time she was pregnant; after using apiol for nearly three weeks she called on me for something more effective, not knowing that she was pregnant. Examination showed everything to be normal. A fine boy came at full term.

Case 3.—Woman, aged 37, married, healthy in every respect. She borrowed an apiol prescription from a friend. After using it for two weeks she came to me for "something more effective." She "got left" in both respects.

The doses in all three cases were the same as those which proved effective in relieving the menstrual derangement previous to the pregnancy.

Geo. H. Tichenor, Jr.
New Orleans, La.

[This is the first report we have had to show that Bartholow was correct in his assertion that apiol, while ordinarily an effective remedy for amenorrhea, could be given during pregnancy with safety, since it does not tend to induce abortion. We should be glad to receive further reports along this line. If there is a consensus of opinion in regard to this matter, it greatly enhances the value of this remedy.—Ed.]

THE CONTINUOUS WARM BATH FOR BURNS

In the issue of The American Journal of Clinical Medicine for March five different authors have published articles on the treatment of burns, but except one, Dr. W. P. Howle of Charleston, Mo., none has mentioned burns of second degree, burns of great extension.

Dr. Howle says: "Immersion in water shuts off air contact and does relieve pain. If the hand or foot is the part to be treated the water will bring relief temporarily, the while other applications are being prepared, etc." But these remarks do not do justice to the subject. The water-bath does more than relieve pain, as I wish to demonstrate by recapitulating from my various writings on the continuous warm-water-bath in case of serious combustion, recommending it as the ideal remedy.

September 14, 1857, a fire broke out in a pyrotechnical laboratory in Frankfort-on-the-Main. Of twenty persons burnt, seven had perished in the flames or died from inhaling obnoxious gases. Among the thirteen remaining, who were taken to the hospital, different degrees of combustion presented themselves. All these patients were treated by Dr. G. Passavant, and all except those with burns on the head alone were given the continuous warm bath, according to the extent of the injury—the partial or the full bath.

This is the first record of treatment of burns by the continuous warm water-bath. Passavant's report was published in *Deutsche Klinik*, 1858, Nos. 36, 38 and 39, and it is a masterly scientific article well worth reading this present day. Strange to say, Hebra wrote in the *Allgemeine Wiener Medizinische Zeitung*, in 1861 (No. 43): "The continuous full bath given for therapeutic purposes and kept up for days, weeks and months has, so far as I am aware, never been tried or carried out by anyone."

The action of the continuous bath is manifold. It gives almost immediate relief from pain and can be considered as the most excellent anodyne.

Another advantage of the warm-water treatment is that the water penetrates the burnt tissues, and in consequence they remain moist and soft. They detach themselves easily and are washed away after having become loosened. Thus the wound is constantly kept clean. There is no accumulation of pus nor formation of crusts of desiccated wound secretion, and what is most essential, no dressing is required.

The patient has not to suffer the often painful procedure of change of dressing.

Concerning further and most essential advantages of the continuous warm water-bath in case of burns we have to study its physiologic action on the circulation and innervation in general. I may be permitted to refer to the chapter on the continuous warm water-bath in my book, "Carbonic Acid in Medicine." There are certainly many cases which would prove fatal without this bath, while with it they make a quick recovery. We know the serious effect of extensive burns on the nervous system, and here the bath must be considered as the best of all remedies.

When a part of the body is placed in warm water, the nerve-ends of the skin become irritated. This irritation is transmitted to the vasomotor nerves and is followed by dilatation of the blood-vessels, and consequently by acceleration of the circulation. This accelerated blood circulation facilitates the elimination of the products of inflammation and infection, and with the removal of pyrogen substances and toxins, through the general circulation, fever will be reduced. This fact I have observed especially in case of erysipelas of the extremities. But returning to combustion: The warm bath is a means to stimulate metabolism, the principal desideratum when we have to deal with severe injuries needing great recuperative power.

Above all, the continuous warm bath in case of extensive combustion is ideal asepsia (not "asepsis," because this would be ungrammatical) and antisepsis.

A. Rose.

New York, N. Y.

UTERINE HEMORRHAGE—TANDEM TREATMENT

Recently I was called into a case of uterine hemorrhage which had been under the care of another doctor. The patient was very ill indeed and the hemorrhage was terrific. After a few questions she raised her pale face to me and said, "The doctor put a tandem up me." A tandem! thought I, it must indeed be serious. On investigation I found a string, and on pulling on the string four dark-bay objects one after the other trotted out, and I did not think the term tandem so inappropriate after all. They were blood-saturated tampons. I have heard a number of rich ones, like this, in my time, but have failed to place them on record and have consequently forgotten them. Can't we have a symposium on medical breaks? Let's all send in what we have heard and we shall have some good reading for after-consultation hours.

E. S. McKee.

Cincinnati, O.

A COMBINED SERUM, OBTAINED FROM THE JACKASS AND THE BILLY-GOAT

For several years I have been studying and investigating, in hopes of discovering some way of controlling that peculiar mental condition of individuals who suffer from lack of resolution—those people who have talent, but lack confidence in themselves, are undetermined, and easily surrender to slight opposition. I believe my experiments justify me in claiming that I have at last discovered a serum that will change this peculiar mental condition and will give the people who are treated with it that which Rev. Dixson of New York is pleased to term "Backbone."

The first serum I used was obtained from the blood of that very determined animal, the jackass, and after obtaining the blood from the animal I injected the serum from it into the arm of my weak-minded patient. Of course, this method of procedure is severe on the ass, but it helps the head of the patient. After using my serum I found that the patient became more determined and was no longer the unsteady and weak individual of the past.

My great amount of experimentation has caused me to change my serum some, so I now combine the serum obtained from the jackass with serum that I obtained from the billy-goat. I first shave off the billy-goat's whiskers, then withdraw the required amount of blood. This new serum, that I claim to

be the originator of, will soon be on the market. I am making arrangements with a certain Michigan firm for its manufacture. One dram (sixty drops) of this serum is the maximum dose.

After taking one dose any ordinary individual becomes firm in his dealings with men and no longer fears opposition. The jackass serum causes the patient to become strong in his lower extremities, while the billy-goat serum seems to work in the head. I notice that a patient who takes it is able when attending public meetings of any kind to "butt in" and also capable of "kicking out" if necessary.

I have given my serum the title of "Assogotine." When prescribing please see that it is in the original package and has my signature on the label.

Considering the fact that there are so many people in this country who do not possess the intellectual power, from lack of firmness, to succeed, I flatter myself that this serum will be a great benefit to our race. Dr. Hosler has advised me to take a trip over to Germany and have the discovery announced from that country, but I have decided that competition would be too strong, and I feel that the American practitioner will see the great worth of my serum and give me credit (*and the price*) for it. So I have decided to remain in this country.

In giving this serum to your patients be sure to avoid giving an overdose. In my experiments I once gave an overdose to one individual. He went home and ate up all of his wife's "fancy-work," butted the furniture over, and "kicked" the servant girl out of the house. So too much will make the patient vicious. Start in by injecting small doses, say five drops, at first, then gradually increase until you get the patient up to the proper mental standard. After treating him a few days it is well to take him to some public meeting, say a Christian-science meeting, in order to see if he is able to be firm and stand up for his convictions. No doubt many physicians will take this serum themselves in order to grow less timid about expressing themselves on medical matters. For the sake of your own reputation never give this serum to that class of people called agitators or reformers.

If used with caution the serum is perfectly harmless when used on selected cases. I will report the results of my investigations from time to time. Would be pleased to have others report their results. "Assogotine" will be placed on sale in a short time. One physician had a son he desired to become an orator, but this young man was timid and bashful. The doctor administered a dose of "Assogotine." His son went before a large assembly and delivered Bryan's speech almost *verbatim et literatim*, except that he got the "crown of thorns" on the wrong place, and the "cross of gold" upside down. The boy is now known as the flaxen-haired orator of Breweryville. For men who fall in love and have not the courage to propose, give them "a shot" of this serum, and watch them "swell up" and strut around like unto a turkey-gobbler. With the dignity and eloquence of a Romeo of old they will propose to the first woman they meet.

Brose Horne.

Gas City, Ind.

TREATMENT OF VARICOSE ULCERS

The majority of indolent ulcers are found on legs and undoubtedly are the result of varicose veins or the constitutional causes that produce varix, the degraded venous circulation producing cell-degeneration. It follows that this deficiency must be made good if we are going to succeed in reviving normal conditions and produce a cure.

The following clinical report of a recent case, conducted to a complete recovery, will indicate my most recent method of successfully treating varicose ulcerations.

Mrs. T., age 34, widow. She is the proprietor of a dining-room, where she has worked very hard for a long time, cooking and waiting on tables. She suffered from varicose veins for a number of years. During the winter of 1906 a wound appeared on her left leg, just below the patella. She thinks it was caused by a finger-nail scratch. Several attempts to heal the wound, first by

herself and later by physicians, failed, and the sore enlarged until checked by the usual rampart of shiny, white skin. During the summer a noted skin-specialist rusticated at this famous resort, and the case was handed over to him for treatment. He relied largely upon external antiseptics, and when he had left, I was called in to take over the patient.

Inspection revealed a pale, greasy, raw mass, two inches in diameter, surrounded by the rampart of raised skin and varicose veins. The woman said it looked much worse than it had in the spring. She was very feeble, but as she had a good appetite and digestion, the only constitutional treatment I ordered was nutritious food, properly cooked. I also provided for perfect elimination throughout the entire course, putting her under local treatment now to be described.

First I caused the leg and sore to be thoroughly washed with warm water and green (soft) soap, drying thoroughly with sterilized gauze, which had been warmed to get the aid of a dry heat; then the sore was bathed with a 2-percent carbolic acid solution, and once more dried with the heated gauze. This process was repeated several days in succession. An ointment had been made according to the following formula:

Zinc peroxide	grs. 12
Zinc oxide	grs. 30
Alum	grs. 6
Phenol	grs. 6
Petrolatum	ozs. 2

This ointment was spread on sterilized cloth and applied to the lesion with the ointment placed in direct contact with the sore.

This treatment was repeated every second day for over a month, and every time the application was changed I caused the surface around the sore to be washed with antiseptic soap, followed by a bath of the 2-percent solution of carbolic acid, and the thorough drying with the heated cloths, taking great care that the ulcerated surface was never disturbed after that first cleansing, lest the delicate pink granulations should be destroyed, for the healing processes were detected after a very few changes of the dressing.

Despite the fact that the patient and her friends were somewhat careless in their obedience to my directions, sometimes not changing the dressing for a day or two, and often neglecting the carbolic bath, there was a steady increase of healthy growth and epithelium, and in six weeks she went to work. At this writing (April 1, 1909), four months from the beginning of the above treatment, and ten weeks since it was dispensed with, there is no scar or contractile tissue to reveal the former ulcer, except a slight discoloration of the skin, which is as pliable as any other part of the body. The patient is well and strong and works sixteen hours daily in her restaurant.

In other cases, by reducing the strength of the preparation one-half, I have avoided the skin discoloration, which, however, even in this case is slowly disappearing. The healing process is undoubtedly produced by the liberation of nascent oxygen, inducing increased capillary circulation, thus supplying the necessary nutrition to compel a *vis medicatrix naturæ*.

James A. Thoms.
Manset, Mt. Desert Island, Me.

THE DISPENSARY AND HOSPITAL PROBLEM IN BOSTON

The article on "Charity—or Robbery" in the December number of Clinical Medicine interested me very much. The following item, clipped from *The Boston Sunday Globe*, hits the nail on the head:

To the Editor of *The Globe*—A young medical friend called upon me recently and said: "I'm going to practise medicine, what are the prospects here?" Our conversation follows. The pathetic pictures presented of the condition of medical matters in Boston will be apprehended and appreciated by all practising physicians.

"Boston is a beautiful and wealthy city," said my medical friend. "It's more than that," said I. "It's the perfect paradise of the pauper patient."

"You have fine schools," said he. "We have," said I. "They are organized organizations for the propagation of pauperism."

"You have splendid hospitals for the poor." "O, yes," said I. "Our systems of free hospitals, dispensaries and district doctors and nurses are unrivalled, and admirable adjuncts for the degradation, demoralization and pauperization of the people."

"You talk big," said he. "This is Boston," said I.

"Are the people patiently pauperized?" said he. "They have not yet rallied to rebellion," said I.

"How many paupers have you got?" "Two-thirds of the population," said I.

"You're a humorist," said he. "It's no joke," said I.

"What's a pauper?" said he. "A pauper," said I, "is a poor person so indigent as to depend on the parish or city for support."

"Where are your paupers," said he. "Everywhere," said I. "Some dwell in magnificent mansions, some in hotels, some in hovels. A few in the workhouse."

"'Curious," said he. "'Tis," said I.

"See that building yonder?" "Yes," said he. "That's the City hospital, one of our pauper institutions. Thousands are pauperized there every week."

"You don't say," said he.

"I do," said I. "There every day come merchants, mechanics, clerks, cooks, laborers, ladies, prize-patriots, peace-protectors, firefighters and fly-catchers, with their sweethearts, wives and children, to receive free, fair and faultless treatment."

"Are they known?" said he. "Not all," said I. "Some don disguise for their debut. Some dazzle with diamonds. Some show seedy shawls, some sealskin sacks, some frazzled frocks from our 'uncles' hocks,' some wait willingly, others demand direct discourse with the directing doctor, and defy discipline, but all are perfectly and properly pauperized."

"And the other hospitals?" said he. "It's the same everywhere," said I. "The dear, diseased darlings are duly drained, dressed and deodorized in the different dispensaries daily or by the district doctors and docile nurses at their domiciles diurnally. Even at the relief hospital people with slight scars demand dressings. Recently a rich merchant meandered there and had his hand honeystoned. Returning next morning, he was decently directed to the City hospital, but he thunderously threatened that he was a true, tall taxicrat and demanded distinguished dressing, free and freely. Then we have a very elaborate system of home treatment for those too lazy to go, or too mean to pay car fare, to the hospital."

"You have?" said he. "We have," said I. "They simply telephone to the district doctors' department and a dandy doctor and a natty nurse readily respond. They don't even pay for the 'phoning."

"Who does?" "The druggist."

"But the druggist fills the prescription?" "O, no; there's a charity druggist, too."

"Do the district doctors and nurses attend everybody, rich and poor?" "Certainly. The richer the better. The poor are ignorant and dirty."

"Who attends the poor?" "The family physicians."

"Who pays them?" "Nobody."

"Who pays the free doctors and nurses?" "Miss Collective Charity, the darling daughter of Mrs. Flagrant Fad."

"How do the regular doctors live?" "They exist from day to day, hourly expecting that the health board or the school board of the board of hygiene will start a free-lunch department."

"What is the board of hygiene?" "O!" said I. "It is the stupendous summit of sublimated superiority, or, in other words, the capped climax of the cobblestone path of the perplexed and pauperized practising physician."

"What does it do?" said he. "Everything for the school children," said I; "but chiefly it teaches them the artful art of getting things for nothing. It consists of two doctors and some 30 nurses. The doctors guide the guileness nurse, and the new-made nurse protects the poor pupil with perforated plaster and perfumed pigmy pellets from the bugaboo, burglarious bug of dodging disease."

"How is it done?" "This way," said I. "Every secular school has a district dispensary department, with much medical and surgical supplies. The nurses call and collect to a choice clinic the pupil patients every day, and free and freely diagnose and dish out salves and soaps for every complaint they don't comprehend. After school the nurse goes to the pupil's home and diligently drills the parents in the mad march to the free medical institutions."

"Do nurses prescribe?" "Certainly."

"Is it safe?" "No deaths yet."

"Is it right?" "No. It is woefully wrong to teach children to expect everything for nothing. It's pathetic, too. They often come to my office for treatment and tell me 'mamma said it was to be free.' Recently I spoke to a school nurse about the demoralizing effect on school children of free treatment." "What did she say?" "The child is the State," she said. "A healthy child, a healthy State." I then asked her if all school children were a part of the State and entitled to free nurses and treatment. "Certainly," she said. "Every child that attends school." "Thousands of children attend parochial schools," I said. "Their parents pay public school tax and also pay for their own schools. They are part of the State," I said, "and yet get no free treatment." "O, that's different," she said. "They're Catholic."

"Curious," said my medical friend. "'Tis," said I.

"You haven't any school medical inspectors?" said he. "We have," said I. "We pay them 20,000 cents a year, but they are not supposed to know much and don't count."

"Do nurses prescribe for imaginary troubles?" "Certainly."

"Why?" said he. "Preventive medicine is the modern method," said I. "The department of hygiene is far-seeing and up-to-date. It claims that healthy children must have healthy parents."

"Nothing new in that," said he. "There is, said I. "To make and keep them healthy is new. It's this way. The free school nurses learned from the free district nurses that all bottles brought for charity medicine, to the charity druggist, were whisky bottles and that the people paid for the whisky. The board was horrified. Parents paying for and drinking bad whisky could not be healthy nor have healthy children. The problem is how to cultivate a taste for better free drink. The nurses are now instructed to give free samples of good whisky to the parents to cultivate this healthy taste."

"Good God!" said my medical friend, jumping up. "Do you mean to say the board of hygiene is going to give free whisky to the parents of public school children?" "Certainly," said I. "There is no other way to protect the coming child."

"I'm going back to New York," said my medical friend. "Do," said I. "Bryan says Tammany is sick and needs a doctor."

"A long, last and fierce farewell to beautiful and beggaring Boston," said he. "Ta, ta," said I.

A PHYSICIAN.

Charlestown, Mass.

The doctors want material for their clinics; the medical students have to have the dispensary patients to practise upon; and last, but not least, the school nurses add to the list of free patients. In one dispensary here in Boston patients were asked if they were not able to go to a physician's office. Some confessed they were perfectly able to do so. but Mrs. So-and-So, their next-door neighbor, was being treated here free and she was as well able to pay as the ones being questioned. Others who admitted they were able to pay even part of the fee were sent to the doctor's offices. Following up these cases: a few went to the doctors and others were never heard from. They probably went to the next free dispensary. Some even told the examining physician that the dispensary a few doors below asked them no questions, saying, "We shall go there if you won't treat us." Their statement was only too true.

The physicians complain, but they take the clinics and treat the patients as they come, willingly, and are on the lookout for more. The method of questioning would-be patients certainly made the clinics smaller, and that in the yearly report looked bad. Another disadvantage was lack of clinical material. The letter was not a strong reason for discontinuing personal interviews with new patients.

Out of some eighty cases asked to report to doctors at their offices and make arrangements to be treated by the doctors, perhaps some fifteen were found who did so.

I shall be very interested to find out what the CLINICAL MEDICINE men can do to stop it. Boston needs some help in that line and soon. Reason it out yourself. Why pay a specialist $5.00 or $10.00 when I can get his services free by waiting half a day in a free dispensary?

The article on Brainerd Hospital was mighty interesting. I hope Dr. Brainerd finds that man he is looking for.

LAWRENCE KEITH.

Melrose, Mass.

PRESCRIBING WHISKY

The article in the January number of CLINICAL MEDICINE, p. 74, "Alcohol, Prohibition and the Doctor," is good. Is it not possible to relieve the doctor of the responsibility of prescribing whisky, i. e., the blame for it? I believe that whisky should be used in some cases, though the doctor should not be made a scapegoat or buffer—by the church, the law, or by public opinion—all of which have failed and "the bag" is left for the doctor to hold.

Whichever course the doctor takes, he is "cussed." If he gives a prescription he is blamed by the above-mentioned parties; if he refuses he makes an enemy of his patient. I have tried it and know whereof I speak.

I would suggest that the applicant be required by law to make application by oath —as the writer of the above-mentioned article outlined and that the prescription be signed by two physicians in good standing.

C. W. HUNT.

Brevard, N. C.

ANOTHER INNING FOR OUR POETS

We give this month a number of poems written by our readers. We have more on hand—also good. Some of it will appear later, along with more verse—full (or half full) contributions. Thanks to everybody.

QUATRAINS

Thou, brother—wouldst make straight the maze
Of doubtful winding therapeutic ways,
Whom wouldst thou shoose to guide thy wayward thought,
At whose feet wouldst thou, listening, spend thy days?

Why call on doubters? Doubters are not dead,
They slumber merely. Ask them not for bread;
For, moving thus in dream-beclouded sleep,
Perchance they hand thee therapeutic stones instead.

Nay, only to the wakeful must thou go—
Only from living springs the healing waters flow.
And wouldst thou live, and work, and help, and save,
Then thou must *know*—aye, *thou must know!*

For if within the gasping, heaving breast
The weary heart is fluttering to rest,
And soul hath fled, must thou not say,
"Mine is the blame," if thou hast only *guessed?*

Then through the gloom of nihilistic night
Wave thou the torch of reason and new light,
Choose thou the weapons, strong, precise, and true.
So meet the adversary grim—and fight!

And if, perchance, the morning's rising sun
Beholds the battle o'er, the vict'ry won,
What carest thou who laughs, or rails, or sneers?
For thou, the victor, art the chosen one.

Aye, be thou strong, and strongly join the strife.
Make thyself arbiter o'er death and life.
To him who seeks the pregnant womb of time
With glorious promise and with glorious truth is rife.

L. W. ZOCHERT.

Roselle, Ill.

THE NURSE'S "NIGHT-MARE:" WITH APOLOGIES TO POE

Once upon a midnight dreary,
As I pondered, weak and weary,
O'er a misty, musty tome of anatomic lore,
As I sat there, weary, sleepy,
Gradually I felt a creepy
Sort o' sensation stealing all my senses o'er;
"'Tis some patient's spook," I whispered,
"Sure, I've seen that form before:

"Get thee gone, thou spooky vapor,
Take away thy ugly shape, or
I will dose thee up with epsom salts as in the nights of yore."
Quoth the spook with accents gruesome:
"You may think, night nurse, that you some
More of your vile stuff may down this weary gullet of mine pour."
Then his hollow, sad eyes looked me through,
As he muttered, "Nevermore."

"When vile heat the night was ruling,
And the morning came, so cooling,
And we turned upon our pillows for a quiet, restful snore,
Then you came with rags and water,
Our few peaceful hours to slaughter,
And you rubbed us, and you scrubbed us, and
You doused us o'er and o'er."
And I shivered as I quivered,
"Sure I'll do it nevermore."
Quoth the spook, "Ah! Nevermore."

"In the night when I would call,
Slowly you came down the hall,
After I had rang and rang, until my muscles all were sore,
Oh, I never can forget,
How you made me wait, you bet!
And you sweetly, deeply snoozed while all the bells rang on the topmost floor."
"T'was the telephone," I muttered,
"That you heard, and nothing more."

Then the fire that in me smouldered,
Flamed; and that old spook I shouldered,
Threw him down the basement stairs, and hard upon the cement floor.
Then eftsoons did I awaken—
Found that I had been mistaken;
'Twas Gray's Anatomy that I had thrown upon the basement floor.
For a moment I'd been dozing,
Simply that and nothing more.

MYRTLE PIERCE BEIRDNEAUX.

Spokane, Wash.

SLEEP

Sweet sleep, blest boon to wasting forms of clay!
To soothe man's troubled brow at close of day;
To lift the burdens from his weary frame,
And bless in sleep mankind of every name.

The troubled mind, high-tossing as the sea,
The weary, plodding steps, unbending knee,
The sorrowed and distressed of all the earth
It well transforms into another birth;

Repairs the wasted flesh and weary bone,
The grand exterior of the soul's bright home;
It lulls to rest the grievings of the mind,
Forgetful of the mishaps left behind;

Regains tranquillity to all the man,
And with refreshing dreams his soul expands—
In reaching far above the troubled earth,
From out its miry, darkening maze of dearth.

When thus out from beneath the curtained night
We stand renewed in smiles of morning light,
With muscles strong, and brain and nerve, we meet
The dire demands amid life's sailing fleet.

While through the coming nights of dreary time
We shall be sober kept in reason's line;
Else soon, indeed, without repose and rest,
Mankind would lose its reason at the best:

Would sink far down, impoverished without strength,
And die from long and needed rest at length;
Weary in body and in mind and soul,
Where life should be accounted to the roll.

Thrice blest of other boons to health is this,
Our weary souls with happiness to kiss;
To grant new life for dying men of earth,
Imparting cheer and gladness with its mirth.

It is the fountain of all bounding hope,
And helps us better with the odds to cope;
Fresh vigor to our most gigantic schemes
It gives—after indulgent peaceful dreams.

And thus it well does imitate the hour
When from this world we pass to scenes of power;
When man in its refreshemnt gathers strength,
And his immortal soul with God he links;

Where in an endless day, unlike our own,
He feeds his strength as man has never known;
When as a God he lives, and moves, and sways,
According to divine appointed ways.

Most holy ordinance to health, we love.
It charms the laden brow with scenes above.
Brushes the dew of toil and gives up peace,
And grants to life a long-continued lease.

Jas. A. De Moss.

Thayer, Kans.

"INASMUCH"

When e'er upon Life's toilsome way
You meet a struggling fellow,
Just lend a hand from day to day.
Nor show a streak of yellow;
Hang to the code of kindly deed,
And never mind the written creed.

Lift up the fallen, cheer the sad
With kindly smile and cheerful voice,
Show those who grieve how to be glad—
Make those you meet, with you rejoice;
Hang to the code of kindly deed,
And never mind the written creed.

Share what you have if but a crust,
Or but a glass of water cold;
If done with kindly heart and trust,
It means as much as if 'twere gold;
Hang to the code of kindly deed,
And never mind the written creed.

If through your life you keep this plan
Until your head is hoar and gray,
You'll greatly help your fellow man
Upon his sad and toilsome way;
Hang to the code of kindly deed,
And never mind the written creed.

And when at last, your life-work done,
Worn, weary, old, you sink to rest,
You'll hear the message that you've won
A resting-place among the blest;
For you have helped with kindly deed
Though minding not the written creed.

Wm. C. Post.

Maquoketa, Iowa.

ONE NIGHT IN JUNE

I saw you in the mazy dance,
One glorious night in June,
I caught your eye in an upward glance,
That set my heart in tune;
You met my gaze, as you swung in the maze,
Of the dancers on the floor,
And the light in your eye, as you swept on by,
I have dreamed of, o'er and o'er.

I saw you passing to and fro,
As the music rose and fell,
And I hoped my eyes would let you know,
The tale my tongue might not tell;
For my pulses beat to the cadence sweet,
Of the measure's rhythmic time,
That bore you along, in the slow waltz song,
And gave me that hope sublime.

I saw not the rose you wore in your hair,
Nor the ruby's blaze on your breast,
For neither of these could make you more fair,
Nor still my heart's tumult to rest;
I saw but the flush of the deep warm blush,
Slow mantling your cheek and brow,
That followed your glance. Was it only a chance?
And is it forgotten now?

I see you now as I saw you then,
And, deny it if you will,
I know that your heart responded, when
That glance sent back its thrill.
Oh, that my lips, fast sealed, might have just then revealed
My love-tale to your willing ears;
Oh, that my eager arms had enfolded your charms,
And sheltered you all through the years.

Long years have come and passed away,
Since that other night in June,
But the charm of that moment will ever stay,
As dear as that same old tune.
Though the cycling years may dry up our tears,
And stifle the sob of pain,
The memory yet of the eyes that met
That night will ever remain.

Homer Clark Bennett.

Lima, O.

HYOSCYAMINE

The head of a large business house that had been unusually prosperous had to sign a large number of bonds. As these were all of small amounts the work was very wearing on him, and as the brokers had disposed of the entire lot they were anxious that they should be delivered before the end of the year. Two days before New-Year there still remained two hundred bonds requiring signing. Being sixty-five years of age, this seemed a task somewhat beyond the man. To push the work, one of the brokers called at noon-time, and finding the old gentleman in a discouraged mood, persuaded him to take a slight stimulant in the shape of Scotch whisky, and this seemed to facilitate

work remarkably. During the afternoon this stimulant was repeatedly resorted to, and when evening came, the bonds were all signed, but the old gentleman was utterly exhausted and unable to go home by the street-car.

In order to show their appreciation, the brokers presented him a small monkey, a small hairless dog and a parrot, and thereupon called a cab to take him and his menagerie home. On arriving there, he objected to paying for his ride, saying he had not ordered the cab, and then promptly proceeded to wipe up the street with the insistent cabby. The crowd which gathered before the house brought his family to the window. We can imagine their chagrin when they found the father, a man of sixty-five who had never gone astray once in his life so far as they knew, the active participant in a street-brawl. Rushing out, his daughters brought him and his menagerie into the house while his wife paid the cabby.

Arriving on the scene I administered a sedative, as he was insistent on going out to look after his cabman, and when restrained, attempted to have it out on his family. After being placed in bed he promptly went to sleep. The next morning when his family got up he was found missing, but they were not at all disturbed about this as he had the habit of going to his place of business on Sundays, holidays, and at all sorts of unusual hours. About noon a business associate found him in an intoxicated condition, staggering along the street about a mile from home, and was kind enough to accompany him to his house in a carriage. On going through his clothes, three half-pint bottles of whisky were found. He refused, however, to take any sedative as he didn't wish to go to sleep, saying that he had only just found out what he had been missing all these years and that he was not going to be deprived of the only real, genuine pleasure he had experienced for a long time.

For nearly two weeks his family tried to keep watch over him, his wife even going to the office with him, but almost daily he succeeded in eluding their vigilance and in getting outside of several drinks. As he refused to take any medicine, we had to resort to a subterfuge. His eyes being very much reddened, he consented to use an eyewash for them. In this way I succeeded in administering hyoscyamine, often enough to get the full physiological effect, which was complete relaxation, a condition very similar to that following the prolonged use of alcohol. By this means we were able to keep him at home for ten days, as his wife administered enough "eyewash" to keep him so thoroughly paralyzed that it was only with difficulty that he succeeded in going from one part of a room to another without aid. During all this while his family tried to impress upon him that this unusual fatigue was the result of the Scotch whisky.

The result of this ten-days' administration of hyoscyamine so discouraged the patient in the tonic powers of alcohol that the after-effect, in his mind, didn't warrant its use even for the "good time" it afforded temporarily.

F. B. Gottschalk.

Chicago, Ill.

A SAMPLE OF MY PRACTICE IN MEXICO —A CASE OF CONFLUENT SMALLPOX

Patient, female, aged 45 years, married, mother of fourteen children, native of Mexico. When called, I found the woman in a little adobe hut, lying on the floor, naked, under her a cow-hide. Entering, I found the room packed with people, and the odor was that of a pesthole—repulsive. I could not advise this Mexican about hygienic conditions because of the ignorance and suspicion of these people of all Americans.

Seeing the great suffering of the patient, the body being covered over thickly with pustules in different stages of development, I ordered water, mixed with carbolic acid, sponged the patient all over with it and then covered her with an old piece of a dress soaked in the same solution. After this preliminary disinfection I examined her more closely, finding the temperature 106° F., and pulse and respiration accelerated. I

prescribed aconitine, a dosimetric dose half-hourly, also calomel and podophyllin, followed by a saline laxative.

At the evening visit I found the patient a little more comfortable. I sponged again with carbolated water, 4-percent, painted on some chloral hydrate mixed with tincture of iodine, and covered the body again, as before, with the sheet dipped in the carbolic water. For gargling I gave carbolic water; for disinfection of the intestines, calcium sulphide; for nourishment, milk punch, beef broth and rice water.

The next morning the patient was in a dying condition. She presented a fearful sight, the whole body-surface desquamating, large patches of integument hanging from the upper and lower extremities as well as from the sides of the thorax, and showing the bleeding underlying tissues. Besides, large black spots made their appearance, especially over the cardiac and pulmonary areas. She was muttering in her delirium, no longer able to speak or to swallow; the eyes were replaced by large masses of pustules, her sight entirely gone. From the soles of the feet to the scalp the whole surface was one mass of confluent pus-corpuscle, discharging from thousands of the ripened pustules. Seeing this horrid condition I decided to relieve the poor, suffering woman and injected in the nates half a grain of morphine. Soon she was relieved.

This is not the worst case seen of confluent black-pox, which is at home here.

THEO. F. BENNDORF.

Hicotencál, Tampa, Mex.

"DENVER AND GROSS"

The Denver and Gross College of Medicine has just sent out an excellent schedule of lectures and clinics to be given in the form of a summer postgraduate school during six weks of June and July. The course is to be given by the professors and associate professors of the regular faculty of the college.

The establishment of the summer school marks a decided step in the progress of a western medical school which has for a long time stood well up to the front in the ranks of American medical colleges.

The Denver and Gross College of Medicine was formed in 1901 by the consolidation of the University of Denver Medical School (formed in 1881) with the Gross Medical College (formed in 1887). The college owns the Haish building, in which the didactic work is carried on, a large two-story laboratory building, which is very completely equipped for every form of laboratory clinical and research work, and the new two-story Dispensary building, recently erected solely for dispensary purposes at a cost of $25,000. The dispensary work is an important feature of the work of instruction in this school, for last year there were over 20,000 visits made to the dispensary by poor people. The class in obstetrics had 102 confinement cases last year.

The college has so far graduated 573 physicians. The graduates of this school have made good showings in the license examinations in many states, most of them have done well professionally and financially, and there are always a goodly number of them in positions of prominence. Among them is the Dean of the college, Dr. G. H. Stover, of national reputation as a radiologist, and believed to be the first native-born Coloradoan to graduate in his own state, in medicine. Dr. F. C. Buchtel, son of Ex-Gov. Buchtel is secretary of the faculty.

The faculty list shines with a large number of brilliant names, among whom may be named: Howell T. Pershing, author of "Diagnosis of Nervous and Mental Diseases," and the chapters upon Disorders of Speech for "Twentieth Century Practice of Medicine;" Leonard Freeman, who wrote several chapters of Keene's "Surgery," for Haynes and Peterson's "Medical Jurisprudence," and Genitourinary Tuberculosis for Klebs' "Tuberculosis;" he also was for many years a regular contributor to Sajous' "Annual;" E. C. Hill, who wrote "Textbook of Medical Chemistry," "Pain and Its Indications," "Reasons Why," and the chapter on Tuberculosis for the "International Editors' Cyclopedia," and who is the editor of *The Denver Medical Times;*

T. M. Burns, author of "Essentials of Obstetrics;" Sherman G. Bonney, author of the classic "Pulmonary Tuberculosis and Its Complications," which is now being prepared for a second edition, less than a year after the issue of the first edition. Beside these authors of books are many who have contributed largely to scientific literature, among them being Levy, Fleming, Powers, Whitney, Packard, Jayne, Black, Mitchell, Coover and Hopkins. Certainly the faculty list of this school will compare favorably with that of any medical school in the country.

HOT ALCOHOL IN BURNS

I have been very much interested in the various methods suggestive for the treatment of burns. My plan is to cover the burned surface with absorbent cotton and then saturate it with hot alcohol. The relief is instantaneous. After several hours I pick off the loose cotton and apply an ointment; at the next dressing the remaining cotton comes off easily, after which you can treat the case as you like. While there are many ways of treating burns I am sure there are none that will give relief quicker than hot alcohol, but be sure and apply it hot. Cold won't give relief.

G. D. Brinkman.

Springfield, O.

ADRENAL USEFUL IN BURNS

In the March issue of Clinical Medicine, I notice several formulas given for applications to burns. All of these are good and I have used them, or modifications of them, for a good many years. Lately I have added a few drops of adrenal extract solution to my applications and find that, in burns of the first degree especially, the tendency to blister is overcome.

In one case that I have in mind, a woman spilled the contents of a kettle of hot grease over her forearm, causing what looked to be a serious burn. This was dressed with a mixture of olive oil, 2 ozs.; bismuth subnitrate, 2 drams; and a few drops of carbolic acid and adrenal solution. Within twelve hours there was very little redness and the following night the patient was able to attend a dance in a short-sleeved dress.

Another case was that of a man operating a gasolin engine. Owing to the fact that his engine was not acting properly, he removed the spark-plug and attempted to blow the soot away from the borders of the plug aperture, when the engine back-fired and burned his face to quite a considerable extent. An application similar to the above relieved the acute symptoms within a few hours and the man was able to resume his work the following morning.

The adrenal solution almost immediately relieves the congestion and overcomes the tendency to secondary inflammation. I have, on one or two occasions, left out the phenol in order to test the efficacy of the adrenal solution and have found that while there is some pain following the dressing, it is not continuous after the adrenal solution has relieved the congestion. I have not tied myself to any particular make of adrenal solution, using any standard make that the jobbers have supplied me and find that they are all equally effective.

George L. Servoss.

Fairview, Nev.

CANTHARIDES USEFUL IN BURNS

Seeing a great many experiences with burns appearing in Clinical Medicine I thought I would add mine. The first case I had of a serious burn was one of sunburn. The patient, a boy of 12 (as boys always have done and perhaps always will do), had been in swimming along in the latter part of May. The sun was hot and his clothing was *nil*, and that night there were a variety of whoops and yells emanating from the part of town where he lives. I tried oils and salves, ulmus fulva, *et cetera*, until I bethought myself of carron oil and tinct. cantharides, as follows: Carron oil, 8 ounces, tinct. cantharides, 1 dram. Sig.: Apply liberally and cover with soft linen cloths. In about thirty minutes that whooping ceased to be heard.

In about a week I was called to see another patient, a little girl aged four, who had fallen into a candy pail of boiling wash water. They phoned me and I grabbed up a yellow bottle of the above preparation I had left over from the preceding patient and hurried out there. It was a third-degree burn over the spinal area, second-degree around the buttocks and first-degree on the thighs. In forty-five minutes that child was asleep. I was asked for a prognosis and gave an unfavorable one because over one-third the surface of the body was burned. This little patient lived fourteen days, never had a dose of morphine or other analgesic and was conscious to the last. I won the undying gratitude of that family because pain was relieved and yet the consciousness was not destroyed.

Why did I use cantharides? Tush—don't give it away; but it was probably for the same reasons that our friends use carbolic acid. Ever notice how much a carbolic-acid burn looks like a burn from other causes, especially one from hot liquids? S—sh! Don't mention it; use the above and keep quiet and get results. Don't think cantharides made any difference? Try aqua font., eight ounces, tinct. cantharides, one dram, on your next case and see. Seeing is believing.

A. E. Collyer.

Elgin, Neb.

CARBOLIC-ACID GANGRENE

A woman of 44, married, 5-para, of small size, weighing 115 pounds, English-born, rather delicate and debilitated (by menorrhagia, abused digestion and overwork) accidentally cut the ring and middle fingers of the right hand with a kitchen paring knife. The cut was between the first and second joints and deep enough to cause very free bleeding. When the blood stopped she washed her hand in and kept on an aqueous carbolic-acid solution, applying a wet dressing.

Three or four days later the patient noted a bad odor. Two fingers were black and she applied for help. The diagnosis was gangrene of the ring-finger (to within one-half inch of the knuckle) and partial gangrene of the middle finger (skin and fascia or deeper). Amputation of the ring-finger and perhaps of the middle seemed imperative. A weak creolin wet dressing was applied, and a hot-water-bottle, for forty-eight hours. Then I amputated the ring finger close to the knuckle-joint under cocaine. I put a dry dressing on the stump and the other finger and kept the hand on a hot-water-bottle, dressing daily. Internally I gave calcium sulphide, echinacea and strychnine arsenate in large doses; podophyllin and calomel to unload the bowels and phenacetin for the headache. The stump healed well. The other finger recovered its color, the gangrenous tissues sloughed off, and three weeks from the date of injury I gave the dressing over to the patient until granulation complete the job.

E. D. Jackson.

New Castle, Pa.

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[This is another illustration of the danger of weak carbolic-acid solutions. Yet here is a curious thing: Creolin, which is chemically similar to carbolic acid, is used with impunity; we have never heard of its causing trouble.—Ed.]

VARIOUS USES OF CHLOROFORM

For headache apply chloroform in the palm of your hand (on cotton) to the forehead and back of neck; for cramps in stomach, over the stomach.

For threatened abortion nothing is better than this chloroform application, for lumbago ditto. The pains in the chest of pneumonia are quickly relieved by this application.

Commercial chloroform, unmixed, makes a fine liniment and in my estimation stands first in the list of anodynes.

For cold in the head inhale chloroform frequently. This is positively the best.

Chloroform stands first among the remedies for cholera.

Before using the scalpel dip it in chloroform and you can be sure it is aseptic.

When a flea bites you moisten your hand with chloroform and press it over the spot for a minute or so; the fumes pass through the cloth and asphyxiate the little pest.

FRANK POLLARD.

Caspar, Cal.

FACTS AND FADS

As a proof to Christian scientists who lay strong claims to the fact that it is the best for humanity, and to those health-fakirs who loudly state that some special form of diet should be followed in order to maintain good health and to prolong life to quite an old age I briefly report the history of a few cases in order to show that such is not in accordance with the facts and that great age can be reached and good health can be secured without adhering strictly to any special mental or dietetic regimen.

The following cases are splendid examples of where a remarkable age has been attained by the ordinary mode of living and without any special diet fads or precautions being taken to safeguard the health during life, and I venture to say, had any special care been taken by any of them, the same great age might not have been reached. The number of these cases can be multiplied by the thousands, were it necessary, but a few will suffice to prove that mental and dietetic fads and fancies play no part in prolonging human life, but often serve merely as distractions for the temperament, for the time being, for those individuals who require them.

Since the beginning of time mankind has managed to subsist on the ordinary articles of diet and to thrive thereon. Wonders have been accomplished by the ingenuity of man and science has been transformed by masters who lived on the ordinary diet. It was good enough for our forefathers; it is good enough for the present; while future generations will reap the benefit of it.

1. J. H., a retired carpet-weaver, at the age of 93 years, was able to walk to the post-office in full possession of all of his mental faculties and with all of his organs in very good condition. Married twenty-five years. Wife died at the age of 82 years. Inflammation of lungs at 73. No special illness except from fracture of hip, causing lameness. For years worked at weaving in a small room without any special ventilation. Always went to bed in good time and arose early. Simple and regular in his habits. Took ordinary food, along with meat and pork, which he found beneficial. Always happy and never worried—thinking it no use. Never had a headache during the whole course of his life, nor any stomach trouble. Generally slept well and never used narcotics. Did not smoke nor use intoxicating liquors. Latterly had slight deafness. Never wore glasses. Never used an ear-trumpet. Never had an operation for appendicitis nor required any kidney cure. Took no Kneipp treatments and never followed any socalled "Christian-science" rules. Never put himself on peanut diet or McFadyean regimen. Yet he lived to a great age.

2. Mrs. E. W., died at the age of 96 years. Always had good health. Lived in the country all of her life and never had any fads. Was married. Always lived plainly and had a calm mind. Did her daily work, followed the usual diet, and never worried about her food. Had her mental faculties to the end. She always used tea, coffee and meat.

3. J. A., a farmer who lived to the age of 91 years. Always worked hard. Never had any fads. Disposition bright and cheerful. Went to bed in good time and rose early. Followed an ordinary diet, and had a calm mind. Smoked some but never took liquors. Possessed of his mental faculties to the end.

4. A. S., a farmer who reached the age of 90 years. Always worked hard, and followed the usual diet, including tea, coffee, meat, pork, potatoes. Went to bed early and arose early. Smoked some. Never had any fads. Believed in the hand of Providence guiding the course of events. Had full power of mental faculties to the end.

5. J. G. M., a retired minister, is still living, at the great age of 95 years and in full possession of all of his mental faculties. Married young. Has lived simply all of his

life and ordinary diet has been his rule. Always took plenty of time in which to eat his meals, chewing his food well. Always possessed a calm mind. Went to bed early and arose early. Regular in his habits. No fads of any kind. Used tea, coffee and meat all of his life. Never smoked. No severe illness at any time, but always enjoyed pretty good health. Latterly slightly deaf. Active during the most of his life. [Since writing this, J. G. M. has died. Was in possession of all his mental faculties to the end. Was unmarried.]

6. R. T., a minister, 103 years old and still living. Says his long life and good health are due to a calm mind. Never followed any fad rules but took the usual diet. Smoked a good deal and has taken coffee all his life. Has been an athlete and always active.

7. D. McP., 100 years old and still living, Has no fads of any kind. Has lived plainly on an ordinary diet all of his life, and has enjoyed good health. Has full use of all his mental faculties.

8. Mrs. W., 100 years old, has always enjoyed good health. Never had any fads to worry her, living on an ordinary diet. Possesses all of her mental faculties.

9. W. N., aged 95 years, and still living. Has good eyesight and can read well. Never had any fads.

10. J. P., died at the age of 86 years. Always went to bed early and arose early. Lived plainly all of his life; worked hard; never married. Always had a calm mind and maintained full use of mental faculties to the end.

JOHN C. WARBRICK.

Chicago, Ill.

A VALEDICTORY FROM AN OLD FRIEND

After a long silence I am permitted to drop you a few lines. First of all, I have been a subscriber to CLINICAL MEDICINE, the best of all journals, for nearly twenty-five years. I was first introduced to it through the courtesy of my friend, Dr. B. O. Webb, now of Los Angeles, Cal. I have been as many years your pupil, following your instructions as best I could in the use of dosimetric remedies, in the treatment of the various diseases to which man is heir. I want to thank you and to extend to you my kind wishes and heartfelt gratitude for your very many helps and kindnesses to me in some of my difficult cases which I have had to contend with during all those years. You both will ever occupy a warm place in my heart and affections for all those favors.

The dosimetric system of practice of medicine certainly stands a peer to all others. The doctor who does not practise that system is certainly many years behind the van. It's the *sure*-coming practice of the world. I have been in practice over fifty years, but never knew half the pleasure and satisfaction in my first twenty-five years that I have had in the last twenty-five. It grieves my heart to think that just beginning, as it were, to understand and enjoy practice, I now, as the result of declining years, must retire ere long from my dearly beloved profession. Let me say to you both—go ahead! You are right and bound to succeed; you have my prayers and good wishes for future success and a long and happy life.

I can only say like one of old: "I have fought a good fight, kept the faith, and am now ready to be offered up."

Thank God, I leave a son, Dr. W. H. Neel, Jr., of Anson, Kansas, to hold up the banner when I am gone.

Now, doctors, having passed my threescore and ten years of life, I don't expect to study very much more. Hence you may mark my name off your list of subscribers. Wife and I through energy and industry have accumulated a sufficiency to keep the wolf away from the door. I don't (from necessity) have to work. I will close by wishing you both long, pleasant, useful and happy lives.

W. H. NEEL, Sr.

Mayfield, Kan.

[I congratulate you in that you have had the good sense and good fortune to care for your business interests as well as for your patients. The first is a duty as much

as the last. I doubt if you *can* keep out of practice altogether, unless you move to a place where you are unknown. Those who have stood by you, and whose lives you have preserved, will insist they still have claims on you which you can not but admit. So if you want to rest, you'll have to move. You see we do not want to lose you. At seventy a doctor is at his best, with the rich experience of forty-five years back of him, and his value to his community is beyond computation.—Ed.]

"SURE SHOT" FOR PERTUSSIS

I note in the current number of The Clinic the article headed "Therapy in Pertussis." I wish to remind your readers again of the curative effect of the iodide of silver in this distressing malady. The iodide of silver in 1-8 to 1-6 grain doses triturated with pulverized sugar of milk administered three or four times in twenty-four hours will cure the most obstinate case in from eight to ten days. I have used this remedy for over forty years without a failure. I will stake my reputation on this, and you may nail this statement at the mast-head and keep it there until something better is found.

George D. Stanton.

Stonington, Conn.

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[Dr. Stanton speaks so positively of the value of this remedy that we hope others will try it and report.—Ed.]

ESPERANTO FOR PHYSICIANS

Noticing an article under the above caption, I wish to say that I heartily endorse the course in Esperanto. I have studied he language and both read, write and speak it. I learned it in my spare moments from "The American Esperanto Book," by Arthur Baker, Chicago, and would advise those who want to go into it thoroughly to obtain this work. I am not selling the book and have no interest in it other than I know it is good. The language is both easy and comprehensive and should be spoken as an auxiliary language by everyone. Having also learned the Danish-Norwegian and Swedish languages since I commenced to practise medicines I ought to be a judge of the adaptibility and easy acquirement. I hope to see it become universal.

A. E. Collyer.

Elgin, Neb.

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["The American Esperanto Book," with other books and periodicals on the same subject, is advertised on page 36, this issue. Take the course in our journal and provide yourself with everything that may help you. Esperanto is an exceedingly interesting language, and a knowledge of it will soon be almost indispensable. We have just learned that it has been made an *official* language, in which papers may be read and discussed, at the International Medical Congress, to be held in Buda-Pest next summer.—Ed.]

ESPERANTISTS AND THE PHYSICIAN

The appearance of my article on Esperanto, in the January number of Clinical Medicine, has demonstrated two facts: viz., the wide circulation of The American Journal of Clinical Medicine, and the great interest taken in the new international auxiliary language.

To all who are interested in the new language which is conquering the world and is destined to be the medium of all international communication let me say: The American Esperantist Company, 235 Fortieth St., Chicago, Illinois, is headquarters for information and literature on Esperanto.

Mr. Edwin C. Reed, 3981 Langley Ave., Chicago, Ill., is secretary of the Esperanto Association of North America. Dr. Kenneth W. Millican of Chicago is local consul for the Tutmonda Esperanta Kuracista Asocio. (World-wide Esperanto Medical Association.)

The Association was organized at the last World's Congress held in Dresden, last August. It represents the medical profession of the entire world and has adopted as its official organ the *Voco* (vocho) *de Kuracistoj*, a magazine published in the new language. The annual membership fee

to the Tutmonda Esperanta Kuracista Asocio is one dollar, including subscription to the magazine.

Every physician interested in the success of Esperanto should become a member of this association and a reader of the *Voco* (vocho) *de Kuracistoj*.

I trust that all who would like to have an Esperanto department in CLINICAL MEDICINE will take the time to write the publishers to that effect. During the past month I have answered inquiries from nearly all over the United States and Canada.

J. R. SCHOFIELD.

Fort Collins, Colo.

[Our course in Esperanto is already a fact. See page 583. We are, we believe, the first medical journal published to undertake this subject, one which we think will prove of great interest to physicians everywhere. By the way, if any of our readers desire to join the "T. E. K. A.," if they will send us their subscriptions ($1 each) we will see that the money is properly forwarded.—ED.]

WHY CLINICAL MEDICINE IS DIFFERENT

Having read more or less from quite a number of medical journals of high pretensions, I have decided that THE AMERICAN JOURNAL OF CLINICAL MEDICINE, for the average practician, is unique in the sense that it does more for them than do all the others combined. Every whole is made up of small components and these small components are the things looked after by this journal; telling not only what to do, but how to do; not only that it ought to be done, but with what it can be done.

As I used to hear teachers say in the normals, when they trembled lest they failed to get a certificate: "Less theory and more practice. Less of what should be done and more of how to do it." This seems to be the plan of your journal. We all know that the fly walks on the ceiling, but how to get rid of him by any feasible plan is what we want to know. We know that digestive organs get out of repair, but how to repair them concerns us more. A multitude of subjects discussed in some of the "bookworm" journals only fill space, and while a lot of good English is used, perhaps not one practical thought is exhibited to aid the practising physician. While it may be a marvelous production, so far as depth of thought is concerned, its poverty should be measured by its lack of usefulness. We don't care whether a certain germ is a quadruped or a centiped. It exists—but what can we do for our patient?

J. W. YANKEY.

Sylvia, Kan.

["What can we do for our patient?" That certainly is *the* great problem—a problem in whose solution we need the advice and assistance of every reader. Are you doing your part? Can't you think of some practical item which would help us all?—ED.]

A CASE OF TUBERCULOSIS

After reading Dr. Waugh's article on Pulmonary Tuberculosis in the January number of CLINICAL MEDICINE I determined to report a case I am now treating and give you what I think is the ideal treatment.

Mrs. J. H., age 34, married, mother of seven children. She began coughing during the winter of 1907-8, and when I was called on February 3 there was a temperature of 101°F., pulse 110, respiration 30, pains in chest, dulness at base of right and in apex of left lung, and slight expectoration. As she was pregnant and expecting to be confined at any time I had my hands tied so far as any treatment was concerned. On March 14 she was delivered of a male child, and for six days thereafter her temperature ranged from 101° to 103°F.

Examining her sputum, I found it loaded with tubercle bacilli and at once procured a window-tent for her as the weather was too unsettled to put her in an open tent at once. In April she was put out of doors in a tent open at both ends, where she lived all summer, and at this date (Jan. 4, 1909) she stays on a south porch with only a canvas to pro-

tect her from the storms. She sits out on this porch all day and sleeps and eats there. She has taken no medicine since beginning treatment except calomel and podophyllin followed by a saline laxative as needed, for I believe that absorption from the intestinal tract too often starts a tubercular patient on a downward course.

Her meals, taken five times a day, consist of a glass of cream, two raw eggs, rare-done or raw meat, bread, butter, fruits and fruit juices. The cream is separated from the milk by a mechanical separator as soon as it is taken from the cow. Of course she has an occasional rise in temperature, but the febrile periods are now five or six weeks apart and of not more than two or three days' duration, while in the beginning she had fever continuously. She has her own thermometer and temperature charts and keeps her own record. When her temperature is above 99°F. she remains in bed, but when the temperature is normal she exercises moderately.

I have made two mounts of her sputum and in each found the bacilli plentiful, but in the last one they were not nearly so numerous and were clumping, showing that our little allies, the phagocytes, were getting in their work.

Now, what has been the result of this treatment? When the patient first began sleeping in the open air she weighed 115 pounds, had a pulse of 120, respiration 30, severe pleuritic pains, annoying cough, profuse expectoration, no appetite. Last week she called at my office (and by the way, she leaves my front door open every time she comes in) and showed a weight of 144 pounds. I saw her this morning and her temperature was normal, pulse 84, respiration 20, cough almost none, and she says she feels fine.

Don't say "consumption" to your tubercular patients, or they will discharge you and go from one physician to another until they find one that will tell them they have "lung trouble," and order them to take whisky—and then they are soon in their grave, for that is the quickest way I know of to kill a tubercular patient. Get them a few copies of "Out-Door Life," and they will soon be on your side of the argument. Next insist that they do no talking. Then keep the neighbors away, for if you announce that she has tuberculosis and put her in a tent she will be a curiosity and every gossip in the country will vie with every other trying to be the first to call and tell her how "Mrs. So-and-So died with the same disease and every one thought she was getting better, but it was only bloat."

I feel confident that, with the modern methods of treatment, the exact means of early diagnosis, and the great work that is being done to teach the laity how to prevent infection, in future years this great "white plague" will be a rare instead of one of the most common diseases.

J. M. Day.

Waynesfield, Ohio.

WILLIAM B. ATKINSON, EX-SECRETARY, A. M. A.

The Medical Standard has honored itself by a proposition so just, kindly and considerate, that the whole medical profession seems to rise in enthusiastic appreciation. This is that the A. M. A. appropriate $100 a month as a pension to the venerable ex-secretary. *The Standard* says:

"JUSTICE.

"W. B. Atkinson! This venerable man was for many years the honored, respected and loved secretary of the A. M. A. Many a doctor who reads these words will remember his kindly ways, his unfailing courtesy—a man who never could find it in his heart to refuse a favor to anybody. Dr. Atkinson is now living in comparative poverty, in advanced age. It would be a kindly act to pension the deserving old secretary for his few remaining years. The treasury of the A. M. A. is full to overflowing with the voluntary contributions of thousands of physicians. We could well afford to grant him one hundred dollars a month, in recognition of the services he rendered us during the many lean years, when his personal influence meant much to the struggling association. Were such a proposition to be made in the general meeting of the Association it would show how its justice was appreciated. Shall it not be made?"

With this we heartily agree. Let us see that his final days are provided for by the profession as the final days of a noble man like Dr. Atkinson, who has sacrificed his

life and his opportunities to the profession, should be.

All over the country we hear the suggestion welcomed with the warm-hearted appreciation that is ever ready to be shown an evidence of unselfish generosity. *The Medical Record* says: "The older members of the A. M. A. will recall with affection Dr. William B. Atkinson who was for many years their active and untiring secretary—a man of most kindly and genial disposition and one of unfailing courtesy to all, never puffed up with a sense of the dignity of his office and ever ready to lend a willing ear to any member who had a question to ask or a misunderstanding to be settled. . . . . We agree with our contemporary that it would be a graceful act on the part of the Association to vote him a pension . . . and we venture to assert that nothing which the House of Delegates may do at the Atlantic City meeting would receive more hearty approval of all the voiceless members than the granting of a pension to this beloved ex-secretary."

The Tennessee State Medical Association adopted by a unanimous vote this resolution:

"Resolved, that the delegates of the Tennessee State Medical Association to the annual meeting of the A. M. A., to be held in Atlantic City in June next, are hereby instructed to vote for, and earnestly advocate an appropriation of not less than $100 per month, as an honorarium or pension for William Biddle Atkinson, M. D., of Philadelphia, who for so many years served the A. M. A., so faithfully, so satisfactorily and so courageously."

ANOTHER CASE OF TAPEWORM IN AN EGG

A sample copy of your valuable journal arrived at my sanctum and in its pages I noticed an article from Dr. T. R. Mason, in which he states that his daughter had found a tapeworm in a hen's egg. And you ask if any of your readers have met with such a case.

Now, I am not a subscriber to your journal (but think I shall be) and as I met with such an occurrence once myself, I will report it. One morning a gentleman presented a worm that I pronounced a tapeworm. It was about two inches long and was a genuine tapeworm. He said that his wife discovered this worm in an egg.

W. S. Walker.

Woodsborg, Tex.

[Thank you, Doctor. May you become a full-fledged "member" in our great mutual-benefit society, "the family." You're a real "helper."—Ed.]

ERYSIPELAS AND PUERPERAL SEPTICEMIA

Dr. C. W. Hunt asks in the March number of The American Journal of Clinical Medicine, page 332, what the doctor who is treating a case of erysipelas should do if called to an obstetrical case. He should not take the case—as I found out to my regret fifteen years ago. As to how long after treating an erysipelas-case before he can undertake obstetrical work, authorities differ. In Germany the time, as taught at different universities, is from one to fifteen days. Doederlein's rule, in his clinic, (and I believe it a good rule) is: No one who has come in contact with any septic material whatever (this includes erysipelas, diphtheria and scarlatina) is allowed to make a vaginal examination or attend a case of confinement for twenty-four hours.

What is necessary in the way of changing clothing and disinfection? Let the obstetrician change his coat and vest, wash his hands and arms with soap and water, then immerse them in a 1 to 2000 solution of bichloride of mercury and then in absolute alcohol. Wear a sterilized gown. If more seems desirable use sterilized rubber gloves.

A doctor going from a case of puerperal septicemia to another case of confinement within two hours! Shade of Semmelweiss!

C. F. Roh.

Garrison, Neb.

[The advice given is excellent, but we should go a step farther even than Dr. Roh.

In our opinion, before attending an obstetrical case, after doing septic work, the physician should take a full hot bath, washing the hair and sterilizing hands and arms; special attention should be given to the finger-nails, which should be as carefully cleaned and scrubbed as for a surgical operation. A complete change of clothing should be made and the outer garments thoroughly cleaned and aired before wearing to another obstetrical case. In some cases formalin may be used to disinfect them, in the ordinary way. We cannot be too careful.

The name of Oliver Wendell Holmes should be linked with that of Semmelweiss, for it was our American poet who first pointed out the contagiousness of child-bed fever.—Ed.]

A PINCHED NERVE

Just now I am having a difficult case. A man who had his thigh amputated six years ago has suffered continuously ever since, to such an extent as to render the daily use of morphine necessary. The trouble appears to be in the sciatic nerve, which seems to be pinched in passing through the sacrosciatic foramen. We intend to have the nerve excised shortly. In the meantime I am trying to find something besides morphine which will give relief. For nearly a week he has injected gelseminine, as close as possible to the foramen, with such good effects that he has been able to dispense with the morphine without any withdrawal symptoms or inconvenience.

He found the gelseminine gave more relief than did the morphine. Last night, however, a very severe paroxysm of the pain occurred and gelseminine did not give relief. These paroxysms occurred while he was taking morphine, and even four grains failed to give relief. However, I did find something that filled the need, and this was picrotoxin. One hypodermic of one milligram, injected into the arm, following half a hyoscine-morphine tablet given one hour before, put him to sleep for six hours at a stretch. The case is still under observation.

The time has come for a more careful study of the cathartics than has ever been given them. In cases of sluggishness of the colon, where cascara and aloes induce irritation of the bowel beyond the desirable limits if given in doses sufficient to stimulate peristalsis to the normal point, very small doses of juglandin accomplish the purpose more satisfactorily and without the undue irritation; especially when aided by a morning dose of saline laxative. A weekly flushing with hot solutions of sodium bicarbonate, in as large volume as the bowel will hold, is sometimes advisable to ensure complete emptying of the large bowel. The food should be carefully regulated and the use of liquids beyond the needs should be strictly prohibited. These are cases that well repay careful individual study.

W. F. Waugh.

Chicago, Ill.

PUERPERAL CONVULSIONS

In reading over an article in *The Edinburgh Medical Journal*, May, 1906, and copied therefrom by *The Therapeutic Gazette*, entitled "Therapeutic Application of Lumbar Puncture," and reasoning from effect to cause instead of from cause to effect, it occurred to me that lumbar puncture would be a good treatment for puerperal convulsions, and knowing you to be a progressive and up-to-date man, I ask you to give your views in a subsequent number of your journal and see what the "family" of Clinical Medicine have to say about it.

W. P. Howle.

Charleston, Mo.

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[We would rather submit this item to our readers and hear their views. We have already expressed our own views as to the treatment of puerperal convulsions, over and over again, and that very decidedly. There are two causal elements to be taken into consideration, one of which is toxemia, the most important one; the second is the profound perturbation of the nervous and emotional centers occasioned by childbirth, which is especially manifest in primiparæ,

when eclampsia is most liable to occur and most fatal. We should like Dr. Howle to say why he looks upon lumbar puncture as an appropriate remedy here, and which of the two elements he would seek to control by this therapeutic measure. The subject would thus be opened for discussion by the "family."—Ed.]

"UNITY VS. NON-UNITY OF DRUG ACTION"

In reference to Dr. Aylesworth's interesting reply under the above caption, in the March number of Clinical Medicine (page 341) I take much pleasure in saying that in the ordinary acceptance of the meaning of the term "stimulation" he is perfectly justified in assuming the position which he does. I think, however, he will agree with me that, instead of discussing the somewhat diversified meanings of the "effect" and "action" of drugs, it will be far more conducive to the elucidation of our subject if we endeavor to form a mental picture, as definitely as this may be done, of the intimate nature of the action of drugs on simple organic life, and then define this condition in appropriate terms.

I fully admit that Webster, and all other lexicographers so far as I know, define a stimulant as a "goad," a "prick," or a "spur," which excites bodily activity, and which is followed by a degree of depression somewhat proportionate to the previous excitement. In other words, it is merely a temporary makeshift which invariably tends toward final exhaustion, and which corresponds very closely with Dr. Aylesworth's definition of a stimulant when, in speaking of a horse that has been goaded to death, he says "that the whip and spur had acted as stimulants, and stimulants only, and that the death of the horse was due to an overdose of these stimulants, or over-stimulation."

To this conception of the action of a stimulant I most respectfully demur. A concrete example, like the following, will perhaps make my meaning of the action of stimulants clear. When a frog's heart is attached to a heart-apparatus, and is transfused or fed with, say, a two-percent solution of blood-serum, it gives rise to a series of tracings, which it registers on a revolving cylinder, the elevations of which mark the best work which the heart is able to perform under the nourishing influence of blood-serum. If, in the next place, strychnine sulphate, in the porportion of 1 to 60,000 parts of the blood-serum, is transfused, the tracings will instantly rise three, four, or five mm. in elevation, and will remain at a higher altitude than the serum alone can give, throughout the duration of the experiment, without showing the least depression at any time. If, however, at any point in the experiment strychnine, in the proportion of 1 to 1000 parts of blood-serum, is transfused, the heart's action—as shown in the tracing—becomes paralyzed immediately, or is at least depressed to a serious degree.

Does this experiment demonstrate that strychnine has "but one action," or does it show that it has two actions, differing both in degree and kind, and which are as opposite to each other as the north is to the south pole? In minimum doses (1 : 60,000) it augments muscular contraction only, or in other words, it elevates or stimulates physiologic function without producing any depression or exhaustion; while in maximum doses (1:1000) it paralyzes or depresses muscular contraction without lending the heart any support. The former enhances or stimulates vital action and makes for health, and the latter impairs vital action and makes for death; therefore, if health and a trend toward death were synonymous or equivalent terms, we might agree with Dr. Aylesworth that a drug "has but one action."

This twofold action of drugs is not confined to strychnine, but has been found to obtain among all the principal alkaloidal salts, glucosides, active principles, alkalis, acids, etc., and shows that it is probably a principle underlying the behavior of all therapeutic agents.

The deduction from the above premises is, therefore, that a stimulant is that dose of an agent which, without affording nutri-

ment to the body, has the power of enhancing or augmenting vital action without producing exhaustion or impairment at any time; while a depressant is that dose of an agent which lowers vital action, and does nothing else.

Thomas J. Mays.

Philadelphia, Pa.

BUTTERMILK FEEDING AND INTESTINAL ANTISEPSIS IN TYPHOID FEVER

I wish to add my support to Dr. W. T. Pratt's method of treating typhoid fever, as given in January Clinical Medicine. It has been my experience that typhoid-fever patients fed on sweet milk remain sick much longer than those who are not.

When I first engaged in the practice of medicine I fed my patients on sweet milk and noticed that invariably bad-smelling stools, tympanites and high fever would follow. Read up all authorities but could get no help, so I made up my mind to depend upon myself.

I removed to the country and was thrown in the midst of typhoid fever. The first patient I saw had been sick two weeks. Tympanites had already set in; there were foul stools and high temperature. I thought this was a good case to try some variant in treatment, so stopped sweet milk at once and cleaned out the bowels thoroughly with calomel and podophyllin. (I had always been taught that calomel was deadly in typhoid fever.) I gave the patient small doses of the sulphocarbolates and fed with buttermilk. On the third day tympanites had entirely disappeared, the stools were natural and temperature was normal. I could cite many more cases of the same kind, all with the same results. Now I invariably treat all my typhoid fever patients with a good cleaning up, following with intestinal antiseptics, and my cases with very few exceptions make rapid recoveries.

Dr. Pratt's explanation of the reason for not using sweet milk and using buttermilk is very good and I will not try to improve upon it.

I anxiously look forward for the monthly visits of The American Journal of Clinical Medicine. I find it one of the best for the busy man.

N. Caire.

New Orleans, La.

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[Now that the Bulgarian bacillus, introduced by Metchnikoff, is readily available in commercial form there is no reason why every physician should not employ buttermilk feeding, in its most effective manner, in the treatment of typhoid fever and many other affections of the alimentary tract. The intestinal antiseptics of course are always indicated in typhoid.—Ed.]

FROM THE HEART OF EMMANUALISM

Speaking of the Emmanuel movement Dr. Powell, Rector of St. John's, Northampton, has the only right idea in refusing people not under their regular physicians' call. If they come to him dissatisfied he sends them back in that way. No abuse can be made of the idea. You know Dr. Worcester's clinic has its regular staff of diagnosticians who eliminate (?) purely physical ills, and it has come to the status of the Vanderbilt clinic, when I was at the New York College of Physicians and Surgeons: people well able to pay even fancy prices take their turn with the rest.

Mr. Powell says he turns down right along ministers who come to him with the idea of taking up the Emmanuel movement as being utterly unsuited to it. But the movement is bound to be hurt by incompetents casting about for something to hold onto their parishes a while longer, and pure charlatans, though, as it recognizes medicine in the broader sense and the physical side, it won't get as low as Christian science. A nurse and also a drug clerk from "her" town attest to her employing a physician regularly—one of some note for whom the nurse worked. By "her" I refer to Mary G. Baker Eddy, of course.

The profession in Boston is almost as hostile to Worcesterism as to Eddyism now, and since a New York church took up

Worcester's work much hostility has developed in New York. Mrs. Eddy started from nothing. Worcester and McComb were teachers of psychology before entering the Episcopal church, so are well fitted.

STERLING BARROWS.

Amherst, Mass.

AMERICAN MEDICAL EDITOR'S ASSOCIATION

The coming meeting of this Association to be held at the Marlborough-Blenheim Hotel, Atlantic City, June 5th and 7th, celebrates its 40th Anniversary and an unusual program has been prepared for the occasion.

It is expected that delegates from the foreign medical press will be present. Every medical editor should make an effort to meet with this society.

HORSES, MOTORCYCLES, AUTOMOBILES?

Doctor, please remember that *next month* we shall discuss "the doctor's traveling outfit." Have you sent in your contribution? If not, please do so at once. Tell us about your horse, your buggy, your driving lamps, your motorcar or motorcycle—and *send us some pictures.*

And do this at once—the time is short.

TO PRESERVE CLIPPINGS

In the September number, 1907, of CLINICAL MEDICINE, I read, from the pen of Dr. H. P. Bagley of Chicago, his plan for preserving clippings. And, by the way, it is a good scheme. However, it was just a little bulky to suit my case, so I fell upon another plan, and since beginning its use I believe it the best of all.

I went to the stationery dealer and bought an "Improved Favorite Letter and Invoice File," 9½x11½ inches, bound in cloth, having twenty-one separate boxes, or pockets, each representing one or more letters of the alphabet, and so marked. It is a bellows collapsible affair, and will spread by filling the boxes to about ten inches in thickness. It cost me one dollar.

I have just finished a review of three years' accumulation of four or five medical journals, clipped and filed what I want to preserve, and consigned the remainder to the trash wagon.

My method of using this file is as follows: I put everything on Appendicitis in the "A" box; Pneumonia or Pilocarpine, etc., in the "P" box; Tuberculosis in the "T" box. If the article covers several pages, I paste the sheets together at the top. Sometimes you have something you wish to preserve on both sides of the sheet. I handle that difficulty by a sheet of letter paper as a memorandum or index in each box or pocket and note the matters of that kind. For illustration, I cut a sheet from my journal, designing to preserve hints on Cancer, and find on the other side some valuable suggestions on Gallstones. I file the clipping in the "C" box, and on the memorandum in "G" box I write "Gallstones with Cancer." This sends me to the "C" box for that information. At present I am filing pathological and therapeutic hints all together.

Since beginning the use of this file I find there should be two separate files. I think I shall get another, and put all therapeutic facts therein.

I contribute this at the risk of being criticized by the editors of the journals. They generally advocate binding. Well, I have tried that and found it rather a slow process, in spite of all your indexing, to find what you want. Besides, in this country binding is quite expensive. It would require ten volumes to hold what I have disposed of far more conveniently than by binding. The binding would cost me ten dollars. I have it now for one dollar. And, if I want anything on Mercury, I have only to turn to the "M" pocket to find what I have in three minutes. A large envelope dropped into the pocket gives an excellent opportunity for classification.

For instance, anything on the eye or ear, I put into one of these large open-end envelopes, and drop it in the "E" box.

I believe I have the cheapest and most convenient system of filing. The only

change I would make would be to get a file 7½x10½ instead of the 9½x11½ I have.

I am more than paid for this, if I help some brother over similar difficulties.

Wm. B. Allen.

Marshall, Tex.

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[There is much truth in Dr. Allen's argument in favor of clipping-files, and yet we must insist upon the absolute necessity of binding one's better-class medical periodicals. For, no one knows in advance just which items may come into demand, while if promiscuous extensive clipping is adopted, the files become cumbrous, and the work of arranging grows beyond the busy man's capacity—not to mention the difficulty about different subjects on two sides of a sheet. If for practical reasons, as indicated by Dr. Allen, one prefers a limited clipping-file, still one should bind the journals even in their mutilated state, because of the many articles of value that may be wanted for reference some time or other. One single article in a life's practice may pay for the cost of binding a hundred volumes and cover subscription price, too. However, what if one order two sets of a good medical journal; what is one or two dollars extra a year in practice? A carpenter must have a sharp saw, a tailor a sharp-pointed needle. Also, one may, for 20 cents, duplicate any mutilated number.—Ed.]

RATTLESNAKE VENOM

Will any reader who can put me in the way of a supply of rattlesnake venom, large or small, kindly communicate with me upon that subject.

W. C. Abbott.

Chicago, Ill.

ATLANTIC CITY IN JUNE

I suppose that you are planning to attend the meeting of the American Medical Association at Atlantic City, June 8 to 11. There is certain to be a large attendance, many interesting programs in the different sections, the scientific and commercial exhibits will be attractive, and politics—red hot! Can you afford to miss it?

If you are going let us suggest that you engage rooms as soon as possible. Atlantic City is full of good modern-priced hotels; among them we can suggest the Wiltshire, Shoreham, New Clarion, Majestic, Clarendon, Grand Atlantic, Princess and Berkshire Inn. We can recommend any of these to our medical friends.

ESPERANTO FOR PHYSICIANS

The Structure of the Language.

The Vocabulary.—Esperanto is constructed on the following general plan: A vocabulary of root-forms, representing basic or essential ideas in the abstract, was made by Dr. Zamenhof, the inventor of the language, by a comparison of the principal Aryan languages. Many European languages use simple variants of the same original root-word, modified according to the linguistic characteristics of the particular language, to represent a certain idea. Thus we have, to represent the idea of the begetter, in Latin, *pater;* Greek, *πατὴρ;* Italian and Spanish, *padre;* Portuguese, *pai;* French, *père;* German *Vater;* Swedish, Norwegian, and Danish, *fader;* English, *father,* etc. These words are all philologically akin, and represent variations from an original word, which have been evolved according to certain natural laws of change in speech now well known to philologists.

Roots.—The root for each idea in Esperanto is taken from that root-form that is most widely represented in various Aryan tongues, so that it shall be more or less familiar to as many people as possible. This root—which, be it remembered, is not in itself a word—becomes a noun, adjective, verb or adverb, or as many of these forms of speech as the underlying idea is susceptible of, by simply adding a characteristic terminal letter, viz., for a noun *o,* an adjective *a,* an adverb *e,* and a verb in the infinitive mood *i.* Similarly the vari-

ous parts of the verb have terminations (which are the same for all verbs; there are *no exceptions or irregular verbs* and *only one conjugation for all verbs* in Esperanto) representing the three periods of time, past, present, and future, the conditional and subjunctive-imperative moods, with participles of all three tenses, both active and passive.

Primary Words.—Besides the root-forms, which become words only when the proper grammatical terminations are affixed, there are certain root-words, i. e., words complete in themselves without any terminal. These words are the pronouns, conjunctions, prepositions, interjections, and a few primary adverbs, together with the numeral adjectives and the definite article. Many of these, however, can themselves be modified also by grammatical terminations, so as to form parts of speech; thus, the preposition, *antaŭ,* "before," can become an adjective, *antaŭ-a,* "former," or an adverb, *antaŭ-e,* "formerly," by adding the appropriate terminations.

Prefixes and Suffixes.—The significance of words can be further modified by the use of prefixes and suffixes. There are about 6 of the former and 30 of the latter, though this number is being added to as necessity arises. Each of these represents a definite idea always in precisely the same manner. In this way a large number of what are separate words in most national tongues are entirely eliminated, their substitutes being words built up by the use of prefixes and suffixes according to definite and invariable rules. For example, in English (and in most other languages) there are two distinct and unrelated words for father and mother. In Esperanto, however, the suffix *in,* signifying the female sex (there is no gender, in the grammatical sense, in Esperanto), renders a separate word unnecessary. *Patr*—being the Esperanto root for father, *patr-in*-indicates the corresponding female relationship; so that by adding the noun terminal *o* we have respectively—*patro,* father, *patrino,* mother. In the same way, *vir-o,* man, becomes *vir-in-o,* woman; *bov-o,* ox, *bov-in-o,* cow; and so on for every idea that can be conceived of as having sex. Other suffixes signify, for instance: the-place-in-which, profession, duration, collectiveness, singularity, solidarity, membership, diminution, augmentation, propensity, concreteness, abstraction, etc., as will be detailed in due course.

Compound Words.—These are formed, as in English, by prefixing to the base-word (noun, verb or adjective) the limiting, or defining, word (with or without its grammatical terminal, as euphony may require). The limiting word may be another noun, an adjective, a preposition, or a verb, just as in English. From limiting an ache to the head we get in English, headache. So in Esperanto, *kapo,* head, and *doloro,* ache or pain, give us *kapdoloro,* headache. In like manner from *antaŭ,* before, and *brako,* arm, we have *antaŭbrako,* forearm; from *provi,* to prove or test, and *tubo,* a tube, we get *provtubo,* test-tube; *antaŭ,* before, and *vidi,* to see, give us *antaŭvidi,* to foresee; from *griz-,* gray, *barb-,* beard, *ul-* a "person characterized by" (one of the suffixes), and *o* the sign of a noun we get *grizbarbulo,* graybeard, and so forth.

When the speaker is thoroughly familiar with the prefixes and suffixes, etc., he will be able to construct any word he wants, if he does not know what word is generally used, and even should another word be in common use, if he has constructed his own word according to rule, it will be good Esperanto, and perfectly intelligible to all Esperantists of whatever nationality. Thus in English we have the word to "prefix," meaning, to fix before, or in front of. The Esperanto is *prefiksi.* But whereas in English we could not say forefix or beforefix, without laying ourselves open to a charge of at least "broken English," the Esperantist could say *antaŭfiksi,* and the

word would be not only intelligible (as doubtless forefix would be in English) but also good Esperanto, because it is formed in strict accord with the rule. Whatever follows the rules of word construction is correct Esperanto whether it has ever been used before or not.

Foreign Words.—These are words of already international character, mostly derived from the Latin or Greek, to represent new inventions or as technical terms with great precision of meaning. Such words are adopted bodily into Esperanto, by treating them as every national tongue treats them, viz., by making them conform in spelling and pronunciation to its own natural characteristics. For instance, telephone (German, *Telephon,* Italian, *telefóno,* Spanish, *teléfono,* French, *téléphone, etc.*) becomes in Esperanto in like manner *telefono,* according to definite rules for change of letters The following are a few such Esperantized foreign words: *geologio, telegrafo, fiziologio, fiziko, filozofio, psikologio* (both p and s are sounded), *teatro, astronomio, pneŭmonio* (both p and n are sounded) *ginekologio, ĥirurgio, terapio,* psikoterapio, hidroterapio, bromido, etc.

The rules for change of letters will be given when we come to the more strictly medical part of these lessons, as by this means the physician will be put in possession of a large technical vocabulary without the trouble of learning it.

RECAPITULATION.

Esperanto consists of a vocabulary of root-forms representing the abstraction of basic ideas. These root-forms are selected on the principle of internationality, so as to represent each idea by a form familiar to as many Aryan-speaking people as possible. The root-forms become words by the addition of characteristic terminal letters, always the same for the same part of speech. Certain prefixes and suffixes, each having a clearly defined significance, always the same, modify the original significance of the word, often forming from one root compound words that in the national languages have to be represented by many different words, perhaps even by phrases.

THE ALPHABET AND PRONUNCIATION.

The alphabet consists of 28 letters—5 vowels and 23 consonants. It is the same as in English, except that *q, w, x,* and *y* are omitted and the following letters are added: *ĉ, ĝ, ĥ, ĵ, ŝ, ŭ.* It thus reads: *a, b, c, ĉ, d, e, f, g, ĝ, h, ĥ, i, j, ĵ, k, l, m, n, o, p, r, s, ŝ, t, u, ŭ, v, z.*

ĵ, k, l, m, n, o, p, r, s, ŝ, t, u, ŭ, v, x. ĥĥ

Of these *b, d, f, g* (hard), *h, k, l, m, n, p, r, s, t, v* are sounded exactly as in English.

Special sounds:

c is sounded like *ts* in bi*ts, ts*ar.
ĉ is sounded like *ch* in *ch*urch.
g is always hard as in *g*ag.
ĝ represents the English soft sound of *g* as in *g*em.
h is always strongly aspirated.
ĥ is like the Scotch *ch* in lo*ch,* or the German au*ch.*
j is sounded like *y* in *y*et.
ĵ is sounded like *s* in plea*s*ure or *z* in a*z*ure.
s is always hard and sibilant, like *s* in *s*ystem; never as in ro*s*e.
ŝ is like *sh* in *sh*ame.
z is always soft, as in *z*one.

All the consonants are named by adding the noun terminal *o,* thus: bo, co (tso), do, ro, cho, go, etc.

The vowels are *a, e, i, o, u,* pronounced

a like *a,* in f*a*ther.
e like *a,* in m*a*de.
i like *e,* in m*e, s*een.
o like *o,* in g*o,* sh*ow.*
u like *oo,* in t*oo.*

Besides these there are certain vowel combinations, viz.,

aŭ, eŭ, aj, ej, oj, and *uj.*

These vowel combinations are not diphthongs, but monosyllables and they must be *treated as single letters.* They are pronounced as follows:

aŭ like *ow* in *cow,* or German h*aus.*
eŭ like *eyw* in wa*yw*ard, or *ey-oo,*

in *they* who, pronounced quickly.
aj like *ai* in *aisle*, *i* in *fire*, or French *paille*.
ej like *ayi* in *saying*, *ei* in *rein*, or French *oscille*.
oj like *oy* in *boy*.
uj like *ui* in *ruin*, Spanish *muy*, or French *fouille*.

Each letter (vowel or consonant) receives its full value. When two vowels come together, each is sounded separately, e. g., *konoido*, conoid, is pronounced koh-noh-ee-do not ko-noy-do;

The vowel combinations above mentioned are not exceptions to this rule, for *j and u are not vowels*, but the consonantal forms of y and w, consequently the combination is pronounced as a single vowel. This *prujno* is prooy-no, not proo-ee-no, *fajro* is fy-ro, not fah-ee-ro; *paŭzi* is pow-zee, not pah-oo-zee, etc.

There are no double letters. When in compound words the same letter ends one part of the compound and also begins the next, *each* one must be pronounced. From *treni*, to drag, comes *post-treni*, to drag behind. Both t's must be sounded; *post-treni*, not *pos-ttreni*.

The following combinations of consonants also occur: *gv, kn, kv, sv, ps*, and *pn*. Each letter must be clearly sounded separately. There is in Esperanto no slurring or complex sound, as in the English "knee", psychology, in which the k and p are altogether silent, or as in "singing,"in which the ng has a nasal sound. *Ringo*, a ring, for instance, is pronounced not ring-o but rin-go. The combination of *sc* may be difficult to some, as in *scii*, to show. It must be pronounced *ss-tsee-ee*, not *see-ee*. *Kz* is another combination that demands care. It always has the sound of x in excellent; never that of x in examined. It is *ks*, not *gz*.

RECAPITULATION.

The pronunciation is always the same in Esperanto; practically one sound to one character and one character to one sound. There must be no slurring, especially of vowels, each of which should be pronounced as though it stood alone, though without drawling. Each letter must receive its full value. Finally the *stress is always on the last syllable but one*. This rule is invariable.

The following *memoride technicde* may be useful:

a	*e*	*i*	*o*	*u*	
Pa	made	me	go	too	
uj	*aj*	*oj*	*aŭ*	*eŭ*	*ej*
Ruin	my	toy	now	wayward	May

READING LESSON.

In the following lesson, taken from the *Voĉo de Kuracistoj* ("Voice of the Physicians"), the official organ of the *Tutmonda Esperanta Kuracista Asocio* ("All-world Esperanto Physicians' Association"), an approximate pronunciation is given below each word. Each syllable should be sounded as divided by hyphens, and *the stress* should be laid *always* on the *last syllable but one*. In this lesson, the stressed syllable is marked with an acute accent. *Hereafter, as the rule is invariable, this accent will be omitted.* The student should read the words aloud as often as possible, until the ear becomes accustomed to the sounds and the vocal organs to the movements required to produce them, especially to those that are somewhat difficult for the English-speaking person. While the vowels should not be dragged out it is better at first rather to exaggerate them until facility is acquired. When the learner can speak fluently they will naturally fall into their proper values.

Do,	*la*	*plej*	*gran-da*	*be-zo-no*
Doh,	lah	play	grahn-dah	beh-zoh-noh
So,	the	most	great	need

pro-fe-si-a	*de*	*la*	*ku-ra-*
proh-feh-see-ah	deh	lah	koo-rah-
professional	of	the	physi-

cist-a-ro	*es-tas*	*am-i-ke-co*
tseest-ah-roh	ehs-tass	ah-mee-keh-tsoh
cian-body	is	friendliness

in-ter	*la*	*a-noj*	*pro*	*u-nu*
een-tehr	lah	ah-noy	proh	ooh-noo
between	the	members	for	one

ko-mu-na	*ce-lo*	*ki-u*	*es-tos*
koh-moo-nah	tsee-loh	kee-oo	ehs-toce
common	purpose	which	will be

plej	*bo-ne*	*e-fek-ti-vi-gi-ta*
play	boh-neh	eh-fehk-tee-vee-ghee-tah
most	well	effected

per	*tut-mon-da*	*lin-g-vo*
pehr	toot-mohn-dah	leen-g-voh.
through (an)	all-world	language.

Je	*pli*	*fru-e*	*la*
yea	plee	froo-ee	lah
(The)	more	early	the

ku-ra-cist-a-ro	*i-ĝos*	*per*
koo-rah-tseest-ah-roh	ee-djohss	pehr
physician-body	shall become	thru

lin-g-vo	*ko-mu-na*	*u-nu-*
leen-gh-voh	koh-moo-nah	oo-noo-
language	common	made

i-gi-ta	*en*	*la*	*tu-ta*
ee-ghee-tah	ehn	lah	too-tah
one	in	the	whole

mon-do,	*des*	*pli*	*fru-e*
mohn-doh,	dehss	plee	froo-ee
world,	(the)	more	early

es-tos	*ga-ran-ti-taj*	*la*	*plej*
ehs-toce	ghah-rahn-ess-tigh	lah	play
shall be	guaranteed	the	most

bo-naj	*in-te-re-soj*	*de*	*la*
boh-nigh	een-teh?reh-soy	deh	lah
good	interests	of	the

sci-en-co	*me-di-ci-na,*	*de*
ss-tsee-ehn-tsoh	meh-dee-tsee-nah,	deh
science,	medical,	of

la	*pro-fe-si-o*	*ku-ra-cist-a,*
lah	proh-feh-see-oh	koo-rah-tseest-a,
the	profession	healing,

kaj	*an-taŭ*	*ĉi-o*	*de*	*la*
klgh	ahn-tow	shee-oh	deh	lah
and	before	all	of	the

bo-no	*pub li-ka*
boh-noh	poob-lee-kah.
weal	public.

Ki-e	*de-vas*	*ni*	*ser-ĉi*
Kee-eh	deh-vahss	nee	sehr-chee
Where	must	we	search

ti-an	*lin-gvon*	*se*	*ne*	*en*
tee-ahn	leen-ghvone,	seh	neh	ehn
such (a)	language,	if	not	in

E-spe-ran-to?
Eh-speh-rahn-toh?
Esperanto?

The translation is, of course, very literal, and the indicated pronunciation only approximate. Slight differences, however, are not of so much import as in other tongues, as is amply proved by the experience of many who have conversed in Esperanto with persons of various nationalities, without finding any differences that affected intelligibility in the least.

An English reader will note that in the above Esperanto paragraph the order of the words follows somewhat Latin, Greek and other inflected languages. This, however, is *not of the essence of Esperanto,* but is purely a matter of individual taste and euphony to the ear of the speaker, or perhaps according to the idiom of the individual speaker's mother tongue. Practically, any order of words can be adopted without loss of intelligibility, but the simplest method for an English-speaking person is to follow the order of words he would use in his own language. For instance, the passage

quoted might read as follows, and be equally good Esperanto:

Do, la plej granda profesia bezono de la kuracistaro estas amikeco inter la anoj pro unu komuna celo, kiu estos plej bone efektivigita per tutmonda lingvo.

Je pli frue la kuracistaro iĝos unuigita en la tuta mondo per lingvo komuna, des pli frue la plej bonaj interesoj de la medicina scienco, de la kuracista profesio, kaj antaŭ ĉio, de la publika bono, estos garantitaj.

Kie devas mi serĉi tian lingvon, se ne en Esperanto?

Grammatical Terminations.

O denotes a noun. *Patro,* father. *Vundo,* a wound. *Steteskopo,* stethoscope.

A denotes an adjective. *Patra,* paternal. *Profunda,* deep.

E denotes an adverb. *Patre,* paternally. *Profunde,* deeply.

J added after *o* or *a* denotes the plural. (Adjectives agree with the nouns they qualify in number and case). *Bona patro, bonaj patroj, profunda vundo, profundaj vundoj.*

N denotes the accusative case. Added to the noun or adjective termination, either singular or plural, indicates (1) the direct object of a transitive verb: *La patro faris profundan vundon,* the father made a deep wound. (2) Direction of movement: *Mi iras Francujon,* I am going to France. (3) The time at which an event happens: *La sesan de Marto,* on the sixth of March. (4) The measure, weight, or price: *La kesto mezuras tri futojn da longo, pezas dudek funtojn, kaj kostas dekdu dolarojn,* The chest measures three feet in (of) length, weighs twenty pounds, and costs twelve dollars. (5) The omission of a preposition. *Mi ridas lian naivecon* (instead of *pro lia naiveco*), I laugh at his artlessness. In point of fact, this case covers (2), (3), and (4), in which a preposition may be supposed to be omitted.

I denotes the infinitive. *Ami,* to love.

AS denotes the present tense. *Mi am-as,* I love.

IS denotes the past tense. *Vi am-is,* you loved.

OS denotes the future tense. *Ili am-os,* they will love.

Us denotes the conditional mood. *Li am-us min se mi estus bona.* He would love me if I were good.

U denotes the imperative-subjunctive. *Haltu!* stop! *Mi deziras ke li haltu.* I wish him to stop (I wish that he stop.)

The terminations in verbs *do not change* but are the *same for all persons and both numbers.*

Thus:

Mi amas, I love.

Ci amas, thou lovest (rare).

Li, ŝi, ĝi, oni—amas—he, she, it, one, loves.

Ni amas, we love.

Vi amas, you love.

Ili amas, they love.

And so with all the other tenses.

ANTA denotes present participle active. *Am-anta,* loving.

INTA denotes past participle active. *Am-inta,* having loved.

ONTA denotes future participle active. *Am-onta,* about to love.

ATA denotes present participle passive. *Am-ata,* being loved.

ITA denotes past participle passive. Am-ita, having been loved.

OTA denotes future participle passive. Am-ota, about to be loved.

Participles, being practically adjectives, agree with the nouns they qualify in number and case. Thus, *amanta, amantaj, amantan, amantajn.*

Further, by changing the terminations to those of the noun or adverb we get participial nouns and adverbs. Thus, from *amanta,* loving, we have *amanto,* a loving one, that is, a lover, also amante, lovingly. The adverbial form is used also where English uses adverbial phrases: *Fovirante, li diris adiaŭon,* On leaving, he said adieu.

(To be continued)

CLINICAL · MEDICINE
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PART II—LESSON FIVE

INNERVATION (Continued)

HYPNOTICS (Continued)

Substitutes for Opium.—The danger of inducing the opiate habit, and the fact that morphine always constipates, locks up toxins in the system, and interferes with the digestion renders it advisable that we should not use this powerful agent when any other which has not these disadvantages could be substituted for it. We are fortunate in this, for the reason that for every use of morphine that is mentioned there are other medicines which in the vast majority of cases are even more effective.

As to the relief of pain: Inflammatory pain is better managed by derivatives and vasomotor sedatives, such as aconitine, veratrine and gelseminine. The spasmodic pains, which by far comprise the largest number of these cases, are better relieved by atropine or hyoscine, each member of this group being a better antispasmodic than morphine. For pains due to mechanical conditions, as strangulation of the circulation by bandage, it is obvious that any drug-remedy which relieves the suffering would be of the utmost peril to the patient. Angina pectoris and similar painful attacks are best relieved by a combination of glonoin and hyoscyamine. Whenever it is necessary to use morphine for the relief of pain, its combination with hyoscine and cactin enables us to obtain relief with very much smaller doses of morphine, the relief being more decided also than when morphine is used alone.

Other hypnotics, like veronal, offer much less objectionable measures of inducing sleep. This indication can very often be much better fulfilled by attention to the vasomotor conditions; if vascular tension is high, gelseminine or aconitine will relieve the cerebral congestion and induce that cerebral anemia which is necessary for the induction of sleep much better than morphine. If on the contrary vascular tension is so low that when the patient lies down the tension of the cerebral vessels is not sufficient to prevent the heart pumping an undue amount of blood into them, a physiologic dose of digitalin induces sleep so admirably that morphine is altogether out of the question.

Reflex irritation is better subdued by solanine or cicutine hydrobromide than by morphine. Secretion is as a rule diminished more promptly and more effectively by atropine than by morphine. As a means of supporting the system we have in strychnine a better remedy than any opiate, excepting perhaps the allied principles in opium, which have not yet been sufficiently tested. As a sudorific no combination containing any

opiate is equal to pilocarpine. These remedies are not suggested as substitutes for morphine, but as better fulfilling the purpose than morphine.

Other Uses of Opium.—Opium, of course, may be used for many other purposes than that of inducing sleep. In a general way, the medical uses of opium are, first, to relieve pain; second, to produce sleep; third, to lessen reflex irritation; fourth, to diminish secretion; fifth, to support the system; and sixth, to act as a sudorific.

The alkaloids of opium seem to show a regular series of gradations in activity from morphine to codeine and narceine, and from narcotine to thebaine; in the former class the cerebral activities are more manifest, while for narcotine and thebaine there is greater action on the spinal reflexes.

Opium Alkaloids Compared.—Narcotine approaches strychnine in this respect. Morphine is much more certain in its action than opium. Narceine is intermediate between morphine and codeine, but is a weak alkaloid. Codeine occupies a place midway between. It is less depressing to the cerebral functions and much less poisonous to the medulla; in children its stimulating action on the spinal cord may be manifest. It is much weaker than morphine, and rarely causes the unpleasant after-effects of this alkaloid. As a hypnotic and antispasmodic codeine does not replace morphine, but may be used where the latter does not agree with the patient.

Cushny prefers codeine for the insomnia of melancholia. When there is any tendency to cerebral hyperemia codeine is preferable to morphine. While either will induce a habit, codeine is less liable to do so. In infantile practice codeine replaces morphine generally as an anodyne and hypnotic; also in women, aged persons and those menaced with congestion of the brain.

Other clinicians prefer codeine to hyoscine in sedating the insane, if there is anxiety, precordial distress or insomnia. Merck's codeine is about half the strength of morphine. The single dose for an adult, at bedtime, is 1 centigram; for an infant from 1-2 to 1 milligram. Either may be repeated every half hour if needed. The same care should be exercised as in administering morphine.

Narceine is a useful hypnotic, especially for persons who are seriously ill as, for instance, to allay the insomnia caused by obstinate cough in late phthisis it seems to act better than the other alkaloids of opium. Burggraeve advises narceine for harsh coughs, painful, and as a calmant of the nervous system.

In neuralgias, headache, intercostal neuralgia, gastralgia, sciatica, narceine sometimes succeeds when morphine fails. Here aconitine, gelseminine, butyl-chloral, atropine or cicutine should be associated as indicated. To a newborn infant Van Renterghem gives narceine in doses of half a milligram, repeating every hour as needed. Older children can take two to five times this dose. It may be given hypodermically. Harley's hypodermic formula is preferred, viz., pure narceine, 3 parts; glycerin, 45 parts; warm slightly to perfect solution, then add 1 part of hydrochloric acid and 2 parts of distilled water. This makes a solution of 5 percent

Apomorphine in doses of 1-20 to 1-30 grain hypodermically has often proved very serviceable for the insomnia and delirium of alcoholism. Dr. Tull of Philadelphia speaks highly of apomorphine in the treatment of acute chorea, reporting a case coming on gradually in a girl fifteen years of age, with menstruation not fully established, presenting symptoms of acute mania, thickened tongue, guttural and unintelligible articulation, covered with a confluent rash and with incessant choreic movement. After all the accepted forms of treatment had been employed for two weeks, with no effect, he concluded to try apomorphine, and consequently 1-40 of a grain was administered hypodermically with good results. The choreic movements ceased in about three minutes and the child slept peacefully and quietly. Apomorphine, 1-20 grain every three hours by the mouth, was continued for three or four days, in addition to the arsenic which she had taken from the beginning. There was a perfectly uninterrupted recovery. Within two weeks

the patient went to the seashore for the summer perfectly well.

The case seemed of value, as the diagnosis and earlier treatment were both reviewed and endorsed by a specialist of standing, and from the fact that practically all known means had been exhausted before apomorphine was used. It is a valuable drug in the treatment of insomnia of the insane, and in our opinion it should be tried and used more for insomnia than it is.

Hyoscine is a valuable hypnotic. It is especially valuable to quiet great nervous excitement with insomnia. No remedy has so well controlled the tremors of shaking palsy, and the initial dose that proves effective—averaging 1-100 grain—does not need to be increased even after years of daily administration. It is also a useful hypnotic in the treatment of the morphine habit. The patient is duly prepared, the morphine stopped and hyoscine administered in 1-200-grain doses, rising if well borne to 1-50 grain, repeated as often as necessary to keep the patient in a stupefied state until the withdrawal period has passed. The doses are given every half hour if necessary, in fact whenever the patient shows signs of becoming conscious and troublesome.

Small doses of hyoscine are useful to produce sleep in acute alcoholic mania. The insomnia of anemia and insomnia without fever are well treated by giving hyoscine and aconitine. In the night-terrors from somnambulism, convulsions, etc., when the causal indication has been met, hyoscine with cicutine hydrobromide answers well. In the insomnia of the aged hyoscine, 1-100 grain by mouth in the evening, repeated in two hours when necessary, and in the morning again, often give the patients a good night's sleep. In the insomnia of the insane it is used extensively and with excellent results.

The recent introduction of the combination of hyoscine, morphine and cactus concentration has been one of the most valuable additions to our therapeutic armamentarium. Unquestionably the hyoscine-morphine anesthesia is rapidly gaining in favor. It produces a state of seminarcosis from which the patient can be roused at a moment's notice. In obstetrical practice it not only gives relief to pain but also spares the patient the traumata of childbirth. The pure hyoscine alkaloid from henbane must however be insisted upon, since commercial scopo amine often is contaminated with substances that modify its action (apoatropine, atroscine, etc.), which is not the case with hyoscine. The latter product is more expensive but can be obtained in a state of chemical purity.

When employed in obstetric cases the first injection should be given when the labor-pains are becoming very severe, and the dose should consist of 1-200 grain of hyoscine and 1-4 to 1-8 grain of morphine. In an hour a second injection is given, the morphine this time being omitted unless the pains are very severe. Two more injections may be required at intervals of from one to four hours. The symptoms which have been observed following this medicament are thirst, vomiting, dizziness, headache, diarrhea. No bad action of the heart has been noted nor any tendency to nephritis. No injury to the child has been traced directly to this treatment. A few cases of postpartum hemorrhage have been reported, but no death has resulted from the method. The average loss of blood is materially less than when this anesthetic is not used.

In surgical work it will undoubtedly supplant older methods of hypodermic anesthesia. It would appear to be the ideal anesthetic in use in emergency work, where one may be short of help, as it does away entirely with the anesthetist, and the space and care necessary in the administration of ether and chloroform. The absence of bad after-effects is the most valuable feature in this preparation. While the ability to perform, under its influence, serious operations is of particular advantage to the surgeon, it is no less so in active service in making possible the securing complete rest and analgesia in cases of injuries too extensive to permit of immediate operative attention, such as those of the abdomen or head. It seems a good thing in the hands

of military surgeons and should come into favor with them.

Hyoscyamine is a fairly good hypnotic in aggressive mania, chronic forms with hallucination, subacute and recurrent mania, and the general irritative stages of paralysis. It may be given in doses of 1-1000 to 1-50 of a grain, best in the smaller dose, repeated every half-hour till the mouth begins to become dry.

Cannabis Indica is a good hypnotic in many cases of acute and chronic mania. It also relieves the delirium of softening of the brain, and a dose at bedtime puts a stop to unpleasant dreams. Shoemaker advises it as a hypnotic in dementia from anxiety, and for melancholia and delirium tremens. If the use of cannabis is followed by delirium, it should be combined with veratrine or gelseminine, or with cicutine hydrobromide if there is motor restlessness. The hypnotic effect may be developed by adding a moderate dose of hyoscine or of camphor monobromide. Abdominal pains are usually best controlled by cannabis. The cannabin resin may be given in doses of one milligram. The best preparation is a good extract, in doses of 1-6 grain.

Lupulin in the dose of 10 to 20 grains, repeated in half an hour, acts as a mild hypnotic. It is of especial value in the sleeplessness or nervousness following a mild debauch. It then acts nicely on the digestive organs as well as relieving the tremor and restlessness. In such cases it may be combined advantageously with tincture of capsicum. The bitter taste of lupulin has the peculiarity that it does not persist in the mouth as is the case with most bitter agents. When given internally lupulin is best administered in capsule form; for children the powder may be mixed with sugar. Aromatic spirit of ammonia forms a good vehicle if the drug is to be in liquid form. The official tincture of lupulin is bitter and is not a satisfactory preparation.

As a pain-relieving agent lupulin is in the same class with viburnum and valerian. It is somewhat more active than either and is free from the disagreeable smell and taste of the two drugs named. In children lupulin can generally be substituted for opium. In old people with advanced renal disease it often supplants an opiate when a narcotic is necessary. In the majority of cases lupulin can well be substituted for the coal-tar products in the treatment of the pains, aches and insomnias of the neurotics, where the suffering is not severe enough to demand the use of an opiate.

Conium is more of a hypnotic than it is generally believed to be. *Cicutine*, the active principle, will relieve that irritability which prevents sleep, and in many cases its anodyne power excels that of the synthetic anodynes and hypnotics. While it is not equal to morphine as an anodyne, it is used in many cases where the latter is not needed, besides being free from the physical and moral objections to the use of all opium derivatives. Given with trional or sulphonal, conium is of great value in insomnia accompanied by motor restlessness. This combination will be more fully discussed when we take up the subject of sulphonal.

Gelsemine sometimes acts as a good hypnotic, either alone or with other remedies. Given with pulsatilla it acts very well in overcoming the nervous restlessness of the parturient and the nervousness following labor, as well as after-pains, etc. In the insomnia of nervousness and in delirium tremens and paralysis it has acted very well alone or in combination with opium or chloral, or some of the stronger hypnotics. It may be given in 1-250-grain doses repeated every half hour or so until effect is produced.

Lactucarium is a very mild soporific and may be employed in the sleeplessness and nervousness of children where a stronger hypnotic is not desirous. It possesses an action similar to that of opium, but very much milder. Some think that its action resembles that of hyoscyamine. At any rate, the drug possesses slight hypnotic properties and is especially valuable for infants.

Chloral Hydrate is one of the best hypnotics known, as the sleep which it causes resembles in all particulars that of nature. The patient under its influence drops quietly to sleep, the respirations are

rhythmical, the blood is perfectly oxygenized, and it is not followed by headache. The brain is perfectly rested by the sleep, there is not hyperemia of the brain and a comatose state, as in the sleep produced by opium. It is indicated in cases of sleeplessness, anxiety and mental fatigue, and can therefore be used in mania and patients with worn-out or anxious brain. In the wakefulness of many acute diseases, fevers, delirium tremens, and puerperal mania chloral is a remedy of well-known efficacy. In the insomnia of convalescence it is of decided value. Indeed, where there are no special contraindications, it is the most satisfactory hypnotic we possess.

A combination of chloral and morphine is a very efficient anodyne and hypnotic in sleeplessness due to pain, the latter being palliated by this combination with less digestive disturbance than if the morphine had been used alone, and with greater relief of pain than if chloral had been the sole remedy, the medicines thus aiding each other and serving the purpose of mitigating pain and inducing sleep.

Chloral is of distinct value in the treatment of scarlet-fever, and when used in doses of sufficient size to secure light somnolence it does not seem to be a circulatory depressant. It ameliorates nervous symptoms better than any remedy in the treatment of scarlatina. It allays the itching of the skin, often so annoying in scarlet-fever, and when given routine-fashion during the febrile period and for some days thereafter, postfebrile nephritis seems to be less frequent.

The dose is from 10 to 15 grains for inducing sleep. To reduce reflex excitability producing insomnia use, as an adjuvant, potassium bromide, adding 8 grains to each dose of the bromide in cases of epilepsy; or to an expectorant mixture add a small dose of chloral for irritative cough, the first dose administered not exceeding 15 grains, repeated as the occasion demands. As a rule, however, the dose should not be repeated under two hours.

None but the purest and only recrystallized chloral hydrate should be employed.

PHYSIOTHERAPY

ELECTROTHERAPY

Electrodes.—The shape, style, size and general construction of the electrodes used in the application of the various modes of administering galvanic electricity should be prompted by the purpose to which the electrodes are to be adapted. The surface to be treated and the canal or cavity to be invaded should call for certain shapes and sizes of electrodes. To enumerate them would be an endless task. The manufacturers' catalogs are the best source of information.

The principal and most important feature of an electrode is that it delivers current to the body without offering too much resistance. The electrical contact between electrode and skin should be perfect. If sponges are used, they should be wet. Water is a good conductor. For this reason the complete or partial bath is by many operators used as a means of administering electrical treatments. The region to be treated is immersed in the water, which plays the part of the electrode. A metal plate in the water is connected with one pole of the battery, the other pole (e. g. sponge) being held by the patient or an attendant, who applies it to some part which is not in contact with the water. The technic is simple, the physiological action being in accordance with the principles outlined above. The immersion in medicated water is a splendid mode of administering cataphoresis.

On general principles direct metal contact with the skin, e. g. the abdominal electrode, is not desirable. Contact is most effective and less irritating by means of a moist sponge, carbon, or by wet cloth wrapped around a metal electrode.

Electrotherapeutic applications that are painful are of questionable utility unless pain is unavoidable. If pain can be avoided, it should be. Some of the best and most useful electrotherapeutic applications are painless because the amperage used is slight. Next to producing a good therapeutic result, the operator should strive to adopt an agreeable mode of procedure, if such is at all possible. This is a point of some im-

portance, because much of the pain and discomfort incidental to electrotherapeutic procedures is needlessly inflicted and might be avoided by correct technic.

Cleanliness is a necessary part of electrotherapeutic manipulations, especially with reference to the electrodes used. To use wet sponge-electrodes on one patient after another is practically a cataphoresis of dirt and as such has no place in the armamentarium of a modern electrotherapeutist.

Static Electricity.—Compared to galvanism, *static electricity* occupies a very modest place in our therapeutic armamentarium. Ten and even five years ago every doctor imagined that his office was not up to the requirements of modern practice unless he had installed a more or less pretentious looking static machine. Fortunately the craze is over. Most machines have been turned over to the junkshop, but unfortunately doctors, i. e., the majority of them, have gone to the other extreme in their opinion concerning static electricity. They deny that it has any value beyond a certain suggestive influence.

The trouble has been that by far the largest number of static-machine enthusiasts knew little about medicine and less about electricity. Then there was the medical confidence-man, the fakir who used the static machine as a convenient means to overawe the credulous and "skin" the gullible out of their hard-earned shekels. No wonder that the honest and well-informed physician was disgusted and summarily condemned static electricity and those using it.

Static electricity, within well-defined limitations, is a good thing in the treatment of a variety of conditions. The physiological indications of static electricity are less definite than those of any other form of electrical energy. We must admit that there is a larger share of uncertainly and guesswork in the application of static electricity and a correspondingly greater portion of the suggestive element than in either galvanism or faradism. Yet, static electricity possesses certain characteristic features of its own that make it valuable many times and actually invaluable sometimes. Therefore, the golden mean of conservatism expresses a fair estimate of the subject. There is no doubt that static electricity, if administered by a judicious and skilled operator, is a valuable adjunct in the treatment of many chronic diseases.

What is the physiological *modus operandi* of static electricity on the living body? The life of man is spent within the magnetic field of the earth. The earth is a magnet rotating around its axis and surrounded by induced positive electricity, the earth being the negative element. The particles of solid matter floating in the atmosphere about us, the moisture and vapor that fill space, in many degrees of density, are all charged positively. All vegetation, using the latter word in its vast biological sense, and including the animal and vegetative kingdoms, is a phenomenon dependent on and influenced by positive electrical charges. The researches conducted by S. Lenstrom at the physical laboratory of the University of Helsingfors, and by expeditions under his direction in different parts of the world and under varying climatic and meteorological conditions, have demonstrated the influence of positive electricity on vegetable processes. The most interesting feature of his experiments is the fact that he used electricity produced by a Holtz machine with the negative side grounded. He studied the effects of positive charges of varying potential. His conclusions give to positive electricity of high electromotive force the greatest biological significance.

It would be useless to give more than a general theoretical outline of the subject of static electricity to the students of our course. The technical part of the subject, including the construction of the machine, the physics of its mechanism and the manner of applying the current, can not be learned except by observation, experience and actual demonstration. The man who wishes to become an adept at using static electricity legitimately and intelligently, should place himself under the guidance of a well-informed operator and acquire knowledge by seeing him manipulate the machine

and the patient. Any other way of becoming familiar with the subject is a waste of time. I shall, therefore, discuss in a general way merely the principles which underlie the practice of static electricity and the therapeutic effects aimed at.

It has been demonstrated beyond the shadow of a doubt that animal and vegetable life, with reference to the relative intensity of its outward manifestations, is directly influenced by the difference in potential between the positive and negative terrestial elements. The higher the potential of the positive element, the more active the processes of animal and vegetable life. Lenstrom shows that plants grow faster, develop better and procreate more plentifully under continued positive electrification. Negative charges at first seem to have a similar effect. Soon, however, the activity seems to lag. This indicates that the vital energy contained in the organism and shown in its growth and reproduction, is closely related to, if not identical with, the positive element which the rapidly revolving earth-magnet induces with its magnetic field. Life on this planet, therefore, is electropositive.

Positive Insulation.—What is the practical meaning of these theoretical considerations? Translating these biologic considerations into therapeutic language, it would seem as though a positive insulation (patient on the platform charged positively, negative side grounded) represents an arrangement aiming at the preservation of vitality and physical energy. Clinically this is true. Wherever and whenever a tonic-sedative is indicated, the positive insulation is the proper static application. Positive static electricity tends toward structural and functional preservation of organic tissue. In a much more emphatic sense this statement holds good when the potential of the positive current is raised by induction, e. g., by the use of Leyden jars. Thus the Morton wave current may be classed as an agent which is capable of increasing the physiological resisting power of the part to which it is applied. It restores the metabolic equilibrium which is disturbed in all conditions characterized by increased venous and decreased arterial pressure. Passive congestions are removed by improving the physiological "tone" of the affected region. Pain is relieved because nutrition is rectified and toxic material turned into the proper excretory channels.

Health has been defined as "a condition characterized by perfect equilibrium of arterial and venous blood-pressure." Disturbance of this equilibrium results in locally increased arterial pressure (hyperemia, over-nutrition) or locally augmented venous pressure (anemia, under-nutrition), both conditions resulting in disturbed nutrition of the nerves, whose cry for proper nutriment we call "pain." Positive static electricity, especially of very high potential, in restoring the physiological tone of the affected area, tends to reestablish the normal equipoise of the two forms of pressure and in this way to counteract stasis and relieve pain. If the physiological tone of any region has been completely suspended and the life-principle is fighting for preservation under pathological conditions (inflammation or its antipode: "atrophy," or lack of nutrition) positive electricity would be of no avail. All positive static applications, including the wave current, should be restricted to conditions which are characterized by lower tone of the system or any part, e. g., nervous disorders, venous congestions, chronic inflammatory conditions. In making applications of this kind, etiology and pathology are everything. Symptoms have no therapeutic significance.

Modus Operandi of Static Electricity.—What, then, is the *modus operandi* of static electricity in its action on the tissues of the body? One author states that the nerves of the human system are like tuning forks which will respond to a certain number and strength of force-oscillations. The supposition is that the nervous system is made up of an unlimited number of "receivers," each one being capable of responding to a certain kind of a vibratory impulse. The author supposes that, in giving a patient a static treatment, one or more nerves in the body are bound to

vibrate in unison with the vibrating force-modalities that are reverberating through the system. It is plain that this explanation is neither physiologically nor therapeutically admissible. The human body as a conductor of static electricity does not differ from other conductors in the manner in which it receives and stores current or energy. The latter accumulates on the surface of the conductor. It is the skin which is the real conductor, not the nerves nor any other structure of the body. The physiological, or primary, effects of static electricity are confined to the skin. The therapeutic effects are secondary and follow in physiological sequence the action which has taken place in the skin.

The Positive Potential.—It is well known that diminution of air-pressure causes dilation of the vessels along the external and internal surface of the body. This accounts for the occurrence of hemorrhages, especially in the exposed mucosæ, when atmospheric pressure is decreased. Analogous to the atmospheric pressure which regulates the intravascular blood-pressure, the functional energy of nerve-tissue is regulated by the terrestrial magnetic field by which we are surrounded. When the potential of the positive magnetic energy is lessened, it diminishes the degree of active control which the nerves, the carriers of life-energy, exercise over the several parts of the organism. Thus the muscular fibers in the blood-vessel walls are relaxed and the vessel itself dilates, the moment the magnetic or electrical tone of the vasomotors is lessened. This occurs through the cutaneous nerves which are alone exposed to influences of a magnetic character. The skin-nerves receive the impetus, the vasomotors show its physiological presence.

This explanation is analogous to the physiological syllogism by which Winternitz explains the action of thermic stimuli. If the patient receives a negative spray, the positive potential of the region is lessened, nerve-tension decreases, the tissues relax and arteries dilate. We look upon negative applications of static electricity as being stimulating in character because the arteries dilate and the amount of arterial blood increases. The more the positive potential of the body decreases, the more stimulating will be the effect of a negative static current. The stimulating effect will finally merge into an irritating action as seen by the redness and soreness of the skin which frequently follow negative local applications. If the potential of the body is increased, the electrical action will be restorative, tonic, sedative. If applied to the head, the positive current will cause cerebral anemia and somnolence; the negative current will stimulate, cause wakefulness and mental activity.

The skin is undoubtedly the scene of action of static currents. Through the skin the whole system is reached, a sedative or a stimulating effect being reflected through the sympathetic nervous system as well as by contiguity of tissue. Thus we may produce a distinctly physiological effect on the renal circulation by applying a wave-current to the small of the back in cases of chronic interstitial nephritis. That the static current is of the greatest value in disorders of the skin itself goes without saying.

COMMENTS ON THE LESSON

We start this month with a few comments on the "back" lessons. They are too good to be omitted, yet we have not had room for them in the last two or three issues. Read them carefully, going back to the proper lessons for the data to which they refer. This will make a good review.

Do not hesitate to ask questions. The Director will be glad to have all kinds of inquiry and comment. We want to exchange opinions as much as possible. This adds to the interest and value of the work.

Strychnine in Combination.—Dr. Richard Connell of North Yakima, Washington, says, in regard to the use of strychnine either alone or in combination with other drugs: "In the treatment of all diseases better and quicker results are obtained from other medicines when strychnine is given therewith, e. g., in cases where aconitine and digitalin are indicated better results are

manifested if strychnine be added, that is, under such conditions the action of aconitine and digitalin is intensified very markedly; the same may be said of veratrine and digitalin, or of either remedy separately of quinine in malaria, apocynin in weakened heart, etc.

"Speaking of 'dosimetric trinity': when my attention was called to this combination in a CLINIC article along in '96, it seemed rather odd to see a motor depressant and two motor excitants combined in a fever remedy. But after reading the article it seemed quite plausible. Aconitine reduces fever, digitalin slows the heart and raises arterial pressure, thereby increasing kidney action and thus promoting elimination of waste from the blood, while the strychnine braces up the weakened nervous system. At the first opportunity thereafter I used this combination and was gratified to find that it 'made good.' I have been using it ever since where indicated (and it is indicated frequently) with the happiest results."

Treatment of Acute Cystitis.—Dr. J. H. Lang of Centertown, Missouri, writes in regard to acute cystitis as follows: "I would use arbutin, formin or uron as antiseptic, hot fomentations; codeine for pain; plenty of good water. If the urine is very acid I should use the alkali salts. If acid, use ammonium benzoate or boric acid until the condition is remedied. If there is no improvement in a few days I use boric acid irrigations of 10 to 12 grains to each ounce of water. Keep the patient clean and other excretions and secretions in good condition. Prescribe a nourishing diet free from meat and food that irritates kidneys. See to it that the bowels are open. Keep the patient at rest in bed if possible."

Electrical Treatment of Stricture.—The following condensed resumé is given by Dr. J. C. Wakefield, Vinco, Pa.: "The electrolysis of urethral strictures requires the following technic: A good, small-celled, steady-current galvanic battery with proper connecting wires; milliamperemeter with four sets of electrodes of the following description: egg-shaped, accordion-shaped, tunneled and a combination tunneled and catheter electrode; some whalebone bougies and olive-pointed whalebone guides. The battery should be in good working order and tested upon the patient. The chosen electrode is fitted to the negative pole of the battery and anointed with a good non-conducting lubricant, such as glycerin. The patient assumes a position convenient to himself. The positive electrode is of carbon, covered by a moist sponge, which is firmly applied to the patient's hand, thigh or abdomen. The chosen negative electrode is introduced into the urethra, with the battery as zero and applied gently to the stricture. The electrode should be two or three sizes (French) larger than the stricture. The current is turned on very mildly at first, increasing very gradually to from three to five milliamperes. No force must be used with the electrode; absorption and not divulsion is aimed at. Weak currents at long intervals are best; seances of from five to twenty minutes each at intervals of about a week. Reduce current to zero before withdrawing electrode and avoid all shocks to patient. Use only one size of electrode at each seance. Urethra should not be congested or inflamed or very sensitive at time of treatment. Short curved electrodes are best. Anesthetics are never needed; cocaine but rarely, as it is not intended to cauterize, burn or destroy the tissue. Do not cause any hemorrhage."

Most Important Hypnotics.—Dr. W. P. Cain, Underwood, North Dakota, furnishes the following classified list of the most important hypnotics, telling action, advantages and dangers of each:

"*Morphine.*—Depresses cerebral cortex, lessening receptive power and soothing the system. Tends to produce a habit and is constipating.

"*Bromides.*—Useful in cerebral excitement of non-inflammatory nature. Depresses all the higher tissues. Contraindicated in exhausted states and weakened heart-muscle.

"*Trional.*—Depresses cerebrum, and produces sleep in nonpainful insomnia.

"*Chloral.*—Induces sleep in purely nervous states; of little value in painful states.

Depresses centers of cord and brain. Direct heart depressant.

"*Sulphonal.*—Similar to trional, only not so safe.

"*Hyoscine.*—Useful where sleep is banished by a continual flow of thoughts through an excited brain. In maniacal delirium useful in combination with morphine, chloral, trional. Does not depress heart. Initial dose should be small."

"The Physiologic Effects of the Galvanic Current might be designated as nondestructive," says Dr. T. R. Weed, Cheshire, Ohio. "They affect function by altering structure within physiological limitations. The negative pole is stimulant and the positive pole sedative because there is overstimulation towards the negative pole and a compensatory understimulation of the positive pole, an increased functional activity at the negative pole and decrease in the amount of blood pressure, making it sedative and anodyne, while opposite conditions make the negative pole stimulant."

Functional Neurosis and Electrical Treatment.—Dr. Sylvio Roch, St. Gabriel de Brandon, Quebec, says: "A functional disorder of a nerve is always an indication of malnutrition; usually lack of nutriment or the wrong kind of nutriment. The nerves, as a result, are fundamentally below par and possess less than their normal resisting power. This explains the causation of reflex neuroses of myalgias and many obscure nervous disorders.

"Facial neuralgia I treat electrically as follows: Mild galvanization gives prompt relief. The positive pole should be placed on or near the aching part, the negative near the spinal origin of the nerve.

"Congestive headache: Place the positive electrode on the forehead and the negative sponge on the back of the neck, at the same time making strong pressure on either side of the occiput and back of the neck. Reason: (1) Positive pole is sedative; (2.) negative is stimulant."

Remedies Combined with Bromides.—In replying to this question Dr. T. R. Weed of Cheshire, Ohio, says: "Digitalin may advantageously be combined with the bromides in the case of cerebral disturbance with feeble circulation. Doubtless it is the action of the digitalin upon the peripheral vessels rather than its action upon the heart which is valuable here. Possibly the action of ergotin may prove equally serviceable. By such a line of treatment we secure a condition of comparative inactivity in the cerebral cells and give tone to the enfeebled cephalic vessels; but in doing so the demand upon the brain should be reduced to a minimum, all outward and extrinsic sources of disturbance done away with, the blood enriched by ample and assimilable food, some wine (perhaps) and the arsenates of iron, quinine and strychnine taken as indicated.

"When insomnia is due to cerebral hyperemia the bromides (or gelseminine or solanine) reduce the quantity of blood in the cerebral vessels and secure that cerebral anemia that permits sleep. When these cerebral vessels are so deficient in tone that they can not resist the thrust of blood when the patient lies down, and insomnia in this posture replaces somnolence while erect, vasoconstrictors like ergotin or digitalin will restore vascular tone and induce the sleep-permissive cerebral anemia—if given in exactly dose enough to restore normal tone. If too much is given the balance will be passed and insomnia continues."

Dr. J. A. DeMoss of Thayer, Kansas, says: "I continuously employ bromides, digitalis and belladonna. Such a combination is a fine thing in nervousness, heart weakness and dizziness, which occur in many cases, and in many old people in my practice I find it a valuable combination. They swear by it. Cactus and other heart-remedies could be combined to advantage, but for nervousness belladonna or atropine should be in the combination. Nothing hits the mark more certainly and satisfactorily where there is a nervous condition with cerebral complication. I often employ gelseminine in combination with bromides." These combinations offer successful application of antagonists in combination, if dosed on the principle of securing physiologic balance.

Dr. Fremont E. Wood, Villa Verde, Sonora, Mexico, makes the following comments in answer to this question: "With it digitalin may advantageously be combined and possibly ergotin. I would feel like putting special emphasis on the administration of the triple arsenates in such cases as require bromides. Undoubtedly we obtain the theoretical action of bromides through the office of the strychnine accompaniment. Ergotin may also enable us to realize the action of the bromides in the same physiological way. Indeed, writers have attributed some corresponding (or identical) action between ergot and strychnine."

The Action of Solanine, Gelseminine, and the Bromides Compared.—Dr. Fremont E. Wood says: "In all desirable effects the bromides are exactly paralleled by the new alkaloid, solanine. Three undesirable properties are manifested by all the big-dose bromides: they interfere with digestion, inhibit the sexual function and depress the vitality. Solanine does all three in a less degree relatively. One grain equals in therapeutic effect two drams of potassium bromide. One-twelfth grain may be given to an adult every half to one hour until the desired effect has been secured—while with the bromides the physician may exhaust his supply and himself oftimes before this is obtained. If we have to deal with cases displaying abnormal vascular tension, or when the excited or hypertrophic heart is sending into the cerebral vessels more blood than permits sleep, gelseminine offers advantages far above the older remedies. Mental as well as vascular tension is relaxed by this agent. As this agent favors elimination it leaves no unpleasant sensations or effect; it induces no habit, and by allowing a better supply of blood enhances the nutrition of any part that needs it. Far from inducing a habit gelseminine, I think, in given cases, can be depended on in sustaining the system; at such times it is wise to cease the administration of opiates. The insomnia of the fever convalescent is controlled the better, I think, by the presentation of small doses often repeated rather than to dose for the characteristic signal of drooping lids. Again, the wakefulness of fatigue unfelt may be largely forestalled by small doses of gelseminine taken during the stress of energetic work, whether of the nature of purely mental expenditure of energy or that requiring all our most strenuous output of physical strength, or both."

Opium, Hyoscine and Emetine in Insomnia.—Dr. H. G. Palmer of Detroit says: "Opium is indicated in the forms of insomnia which are brought on or are caused by pain, and here it acts nicely. If there is vascular engorgement a depressant like veratrine or gelseminine is of benefit, in combination with opium. Hyoscine acts nicely in insomnia not casued by pain. It has an analgesic effect upon the sensory nerve-ends. In small doses hyoscine causes a sense of weariness or drowsiness. Larger doses often induce sleep quite quickly. It is an antispasmodic as well as an analgesic and is indicated in motor excitation. There is little danger of forming a habit and tolerance is not produced by long-continued use of it. Emetine relieves insomnia by increasing elimination through the liver, thus helping to relieve autointoxication. It relieves gastrointestinal irritation and any congestion which may be present. It has a quieting influence on the whole system through its effect upon the digestive tract." This influence is remarkably evidenced in alcoholic insomnias, when as much pure emetine is given as the stomach will retain.

Treatment of Delirium.—This is the outline given by Dr. W. P. Barron: "All things being equal—by this I mean in an "ideal" delirium, which I take it your question intends—I would give morphine hydrobromide, gr. 1-20, hyoscyamine, gr. 1-50, and sodium bromide, grs. 5, with capsicin, 3 granules. Give all in hot water and repeat in one hour. I have never had to repeat this dose, although sometimes I increase the sodium bromide or the morphine hydrobromide according to the amount of restlessness or pain. In cases where the real cause of delirium is in doubt—i. e., pain, fever, toxemia or other causes—this

seems to meet the indications. In night fever with restlessness gelseminine with hot epsom-salt baths—sponge-baths—are all I use. In low, dull, muttering delirium with half-closed eyes and cold extremities I find atropine valerianate in full doses almost ideal. For delirium tremens I usually give first half a tablet of the hyoscine-morphine-cactin combination. After this has had effect I order a hot epsom-salt-water bath, sponging the patient at least twenty-five minutes; then he is given one grain of emetine. The "morning after" I put him on graduated doses of nux vomica and capsicum, to be continued for two or three weeks. This treatment with me has been uniformly successful, and I treat many cases of it. Sometimes I find it necessary to repeat the hyoscine-morphine. Occasionally the emetine is vomited up, if so, I repeat. But very rarely is this necessary."

In typhoid delirium, especially of the ataxic form, zinc or caffeine valerianate is a certain remedy: if the bowels are certainly empty and disinfected. Give small doses very often till effect—a centigram every half hour. Dilatation of the pupils is a good indication for these agents.

Treatment of Delirium.—On this subject Dr. Palmer says: "In severe delirium, if the result of high temperature, I reduce fever by sponging and internally give veratrine and gelseminine (or aconitine, if indicated, in place of veratrine). Passiflora in large doses will often quiet delirium and is harmless. Elimination should be increased through the bowels and other eliminative organs. Veratrine acts specially well for this reason. Cannabin, scutellarin and hyoscine may be indicated and of benefit. Morphine may be necessary, but I dislike to use it and have never had a case where I thought it essential except in alcoholic delirium. The treatment and drugs indicated will all depend upon the cause of the delirium and the condition of the patient. In delirium tremens elimination must be attended to without fail, and it is well to test the urine to see if there is any albumin. The hyoscine-morphine-cactin combination acts nicely in many cases and should be given in small doses. The bromides act nicely in these cases also. A hypodermic injection of 1-2 to 1 dram of specific lobelia will usually quiet a patient quickly and is without danger. It produces relaxation and diaphoresis, and lowers arterial tension. Much the same treatment as in simple delirium may be given. Emetine acts nicely in alcoholic delirium and should be given in full doses."

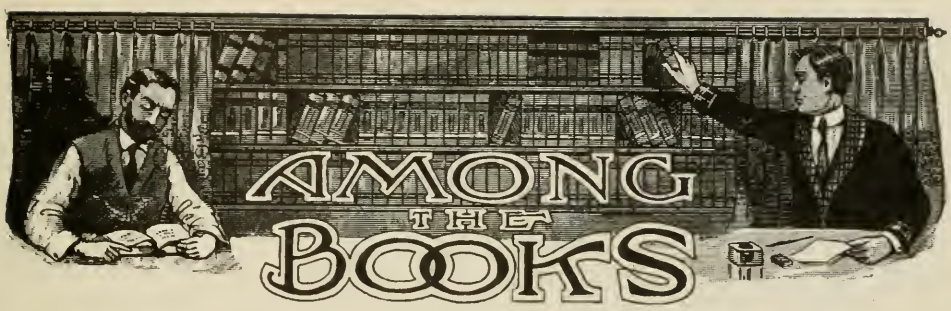
We want to emphasize the importance of a careful examination of the urine in every case of convulsions, whether in adult or infant. In many a case there is suppression or nearly suppression—and the fact is unrecognized. Do not forget to look for sugar or diacetic acid. If the latter is present the indication is for large doses of sodium bicarbonate by mouth or rectum.

EXAMINATION QUESTIONS

1. Outline (from your own experience) five conditions in which opium or morphine is usually given for relief, which might better be treated with other remedies, telling how you would handle them.
2. What are the five indications for the use of opium? Name remedies which may replace it in each indication.
3. Give the physiologic action of narceine. Outline the therapeutic uses of apomorphine.
4. Tell your experience with hyoscine, alone and combined.
5. Differentiate between the action of hyoscine and hyoscyamine. What other alkaloid does hyoscyamine most resemble in action?
6. What are the special indications for cannabis indica? for lupulin? for cicutine?
7. Write briefly of the physiologic action of cicutine, consulting your books on pharmacology.
8. Describe the action of gelseminine. Name three conditions in which you would use it and tell why.
9. When should chloral be used and when avoided? Give some substitutes for it.
10. Tell how static electricity acts upon the body.
11. What is meant by positive insulation?
12. What is the most important consideration in the selection of an electrode?

RESEARCH QUESTIONS

1. Describe the symptoms and signs which would lead you to suspect a person of being a morphine habitue.
2. What are the symptoms of cocaine habituation?
3. What *principles* should govern the treatment of the morphine habit?
4. Name several little-studied active principles of opium which seem to you to possess therapeutic possibilities. What indications do they seem suited to mee'?



MARRS' "CONFESSION'S OF A NEURASTHENIC"

Confessions of a Neurasthenic. By William Taylor Marrs, M. D. With original illustrations. F. A. Davis Company, Philadelphia. 1908. Price $1.00.

This little book is racily and entertainingly written, but not seriously enough to be utilized medically. In fact, we take the liberty to demur against admitting Dr. Marrs to the noble army of neurasthenic martyrs. He does not show any nervous exhaustion in his protean ease of changing from one occupation to another. His hereditary right he may have had to develop a fine specimen of neurasthenic, but he failed to do so. A neurasthenic is a thoroughly superficial character who is ever going but never coming to the depth of either misery or happiness. But our confrère, Dr. Marrs, is not of that character. And he has written a very entertaining sketch of an interesting character which we not rarely meet in this nervously strained age.

CONHEIM'S "DISEASES OF THE DIGESTIVE CANAL"

Diseases of the Digestive Canal. (Esophagus, Stomach, Intestines.) By Paul Conheim. Edited and translated from the second German edition, by Dudley Fulton, M. D. Illustrated. Philadelphia and London: J. B. Lippincott Company. 1909. Price $4.00.

Dr. Conheim is one of Germany's practical and great physicians. He is not satisfied with all the laboratory demands and supplies for minute diagnosis. He listens patiently to the patients' subjective complaints and by judicious interrogations elicits more of them, then by logical reasoning and the help from physiology and pathology he arrives at a diagnosis and to the chief end of medical practice, the healing of the sick. This practice of Conheim the reader will find in the volume before us. It is a most valuable addition to the physician's library.

BRUNTON'S "THERAPEUTICS OF THE CIRCULATION"

Therapeutics of the Circulation. Being eight lectures delivered in the spring of 1905 in the Physiological Laboratory of the University of London, by Lauder Brunton, M. D. Published under the auspices of the University of London. With 240 illustrations. Philadelphia: P. Blakiston Son & Company. 1908. Price $1.50.

This book, while seriously instructive, at the same time is fascinatingly entertaining. Brunton's style reminds the writer of these lines of the lucid style of Sir Thomas Watson he read about fifty-five years ago. Brunton has a happy faculty of instructing, shown to its best effect in these lectures. He takes nothing for granted in the reader's knowledge, and so in the first lectures he lucidly reviews the anatomy and physiology of the heart, arteries, veins and lymphatics, and on this well-laid foundation he proceeds to detail the organic and functional diseases of the organs of circulation, their etiology, pathology and therapeutics. To his vast cognizance of medical literature, past and

present, Brunton adds the experience of a vast private and hospital practice, and he seems in these lectures to take delight in giving them all to his hearers and readers. A delightfully instructive volume.

MUMFORD'S "SURGICAL MEMOIRS"

Surgical Memoirs. By James J. Mumford, M. D., Harvard University. Illus trated. Moffat, Yard & Company, New York. 1908. Price $2.50.

"Remember the days of the world, consider the years of many generations" (Deut. 32: 7) is a duty which imposes itself upon every medical person to whom the profession is not a mere more-or-less valuable milch-cow. Such a trade "doc." will derive no literary or esthetic "benefit" from this book. But to the many of our noble profession who are conscious of their high calling this fine volume of Dr. Mumford is heartily commended. It embraces well-written sketches of the lives of Hippocrates, Galen, Vesalius, Pazé, Haller, Hunter, Lister, Cooper, Brodie, Warren, Physick, McDowell, Gross von Langenbeck, Billroth, and others. It gives justifiable pride to belong to the same profession with these great men of the ages.

HERTER'S "INFANTILISM"

On Infantilism from Chronic Intestinal Infection. By C. A. Herter, M. D., Columbia University. The Macmillan Company, New York. 1908. Price 90 cents.

This little volume is, as stated on the title page, a study of the clinical course, bacteriology, chemistry and therapeutics of arrested development in infancy. There will be but few general practicians who did not have under care one or more of these little patients at one time or another who are puny, weakly and stunted in development, the etiology of whose condition baffles ours and our confrères' erudition and whose minimum reaction to our positive and negative medications seem to re-echo the triumphal vindictive nihilistic voice, "I told you there's no use!"

Dr. Herter has made his studies on five of his own cases which he reports for our study in this volume, and Dr. Holt and the Rockefeller Intsitute for Medical Research gave him further material to study upon. It will not be lost time to study through this faithful work of Dr. Herter and see whether we can subscribe to the idea of infection being at the bottom of infantilism.

BARTHOLOMEW'S "MAN'S PSYCHOLOGY"

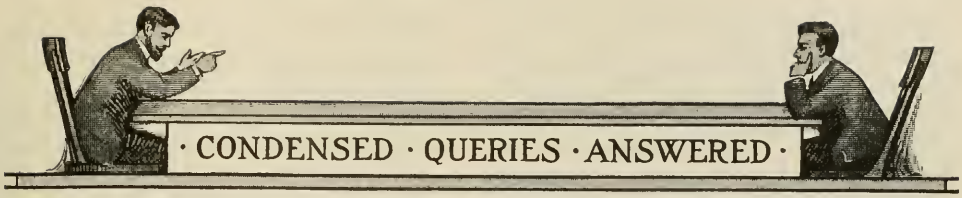
Man, Woman, Know Thyself. An illustrated treatise in practical psychology for the medical profession and laity. A practical, scientific explanation of the effect of thought—the mysterious force which determines one's condition in the present as well as the future life. By Dr. Elmer Jefferson Bartholomew, Chicago. 1908. Price $2.15, postpaid.

There is no need after giving the title page of the book in full to explain the author's purpose of publishing the book, and it need only be said that he is earnest, religious and persistent in pressing home the old saying that as a sound mind will be found in a sound body, therefore the mind must be kept sound by human endeavor in order to enjoy the benefit of a sound body.

WARFIELD'S "ARTERIOSCLEROSIS"

Arteriosclerosis. Etiology, Pathology, Diagnosis, Prognosis, Prophylaxis and Treatment. By Louis M. Warfield, A. B., M. D., Washington University. C. V. Mosby Medical Book Company, St. Louis. 1908. Price $2.00.

This is an important volume, small in size but mighty in usefulness because well and concentratedly written. Arteriosclerosis is not a new disease, but of late possibly a more prevalent disorder. Be this as it may, there is need of becoming more fully acquainted with this lesion and of studying its anatomy and physiology by application to disease at the bedside. To do this Dr. L. M. Warfield's volume will enable the reader well enough.



PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

ANSWERS TO QUERIES

ANSWER TO QUERY 5390.—In your answer to query No. 5390 (December) you miss the mark very much as to the answer the correspondent expected. In the parlance of the Arkansas doctor swamp-fever is used to mean that pernicious form of malarial fever that produces hemoglobinuria with jaundice, black vomit, great prostration and frequently death. This fever is known in India and other tropical countries as black-water fever.

This disease develops in those suffering from a malarial cachexia, but is not often found in the extremes of life. It is also but rarely seen in the negro race. There is an enormous destruction of red blood-corpuscles. In some cases seven out of ten red cells are found to contain the malarial parasites.

The disease is usually ushered in by a rigor, more or less severe, followed by a high fever, bloody or black urine, jaundice and vomiting. These symptoms may subside in a few hours, to be followed by another rigor with all the above symptoms intensified. In some cases we have suppression of urine. If all these symptoms are not met by vigorous and heroic treatment many of the cases will run to a fatal termination in from twenty-four hours to six days.

We begin treatment by giving enough calomel in three portions to act upon the bowels; also, in addition to this, heroic doses of the oil of turpentine, giving 30 drops in water every three hours to an adult until the urine begins to clear, when we cut the dose down rapidly. It is a remarkable fact that oil of turpentine in doses of this size will not produce strangury so long as the urine is black or bloody, but as soon as these symptoms begin to improve strangury will be produced unless the dose is materially reduced.

It is not well understood why oil of turpentine will stop this rapid disintegration of red blood-cells, but it is a known fact among "*swamp*" doctors that it is the most effectual remedy we have to meet this condition. Possibly it destroys the malarial parasite in the blood, thus putting a stop to the further destruction of these cells.

Echinacea (or Lloyd's echafolta) is a valuable adjunct to the treatment. This should also be given in large doses every three hours. Thirty drops at a dose would not be too much while the disintegration of blood-cells is in progress.

There has been a division of opinion among southern physicians as to the efficacy of quinine in these cases. Some condemn it altogether, while others think it is the indicated remedy. I formerly gave quinine by the mouth in heroic doses and lost nearly all my cases. It depressed the heart and increased the breaking down of the red cells. Years ago I discarded the giving of quinine by the mouth and depended upon the turpentine treatment, which has given me fair success. I give some quinine and urea dihydrochloride hypodermically, and I believe it helps to limit the number of rigors, but it is the oil of turpentine that stops the disintegration of the red cells.

The heart should be sustained by the hypodermic administration of strychnine and digitalin. The kidneys should be kept active by the use of large enemas of hot normal saline solution. These enemas should be retained as long as possible, for the absorption of some the water promotes diuresis.

Vomiting should be controlled in some way without the use of morphine. This remedy slows the secretion of the kidneys, and in this way may bring on complete suppression of urine, and when we get suppression of urine in these cases there is a funeral not far ahead.

If one is so unfortunate as to have a case of suppression of urine, an effort should be made to start up the kidneys. The heart should be braced by the hypodermic use o strychnine and digitalin, then give 1-8 to 1-6 grain of pilocarpine hypodermically. The pilocarpine acts upon the whole glandular system, increasing all the secretions; but it is very depressing to the heart, hence the necessity of the precaution to stimulate the heart before its administration; hypodermoclysis and high enemas of hot saline solution should also be tried, in restoring the secretion of the kidneys.

Convalescence should be treated by iron tonics, small doses of the sulphate or arsenate of quinine, etc. It would be well, if possible, for the patient to move to a higher altitude.

W. A. Jones.

Plumerville, Ark.

QUERIES

Query 5433.—"Those Wonderful Cures for Syphilis!" J. T. R., Arkansas, recently received a paper from a New York doctor who, he says, represents a London hospital, offering a hypodermic remedy, claiming it to be a specific sure-cure for syphilis. He asks: "Do you know of this medicine? I need it if it will do half that is claimed."

We know nothing about this wonderful remedy emanating from the "New York doctor who represents a London hospital." Hospitals as a rule do not exploit remedies this way. It is probably some preparation of mercury. As you know, mercurial (gray) oil is injected, and very much better results are claimed by English practicians to follow the injection and inunction of mercury than are secured from its internal use. There are upon the market innumerable alleged "cures" for syphilis, but it is well to investigate very thoroughly their origin and the reliability of their promoters.

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Query 5434.—"Chionanthin and Euonymin in Intestinal Indigestion." W. C. E., Arkansas, would like to try chionanthin and euonymin in a case of intestinal indigestion. The fluid preparations have worked nicely in his hands. He wants details as to the concentrations.

Both euonymin and chionanthin usually have to be continued for some time. You need not hesitate to substitute euonymin and chionanthin for any fluid preparation of euonymus or chionanthus. They are ex cellent remedies and give positive results wherever correctly employed. From 1-6 to 1-3 grain, or even more, of euonymin may be given before meals, or hourly for three doses at night. Chionanthin, in doses of 1-3 to 1 grain, should be taken *after* meals. Of course, you are familiar with special indications for each drug. Chionanthin is an aperient, cholagog, purgative, febrifuge and diuretic. It is of most value in chronic hepatic engorgement. In jaundice and catarrhal conditions of the bile-ducts chionanthin is peculiarly effective. It may be given with podophyllin or euonymin. We cannot quite see, however, that these drugs are indicated in "intestinal indigestion." Pancreatin and bile-salts with papayotin or diastase would surely serve you better, given in connection with the sulphocarbolates.

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Query 5435.—"A Peculiar Case of Suppressed Rubella." J. C. M., Oregon, describes a peculiar case, in the person of a young man 17 years of age, who, up to the time he contracted rubella, always had been

strong and healthy. Some four weeks ago the eruption broke out on him and his parents were unaware of the fact until he returned home from a hunting trip during which he was caught in a blizzard. At the time he arrived home the outside temperature was 20 degrees, and it was raining, sleeting and blowing a northwest gale. Needless to relate, his clothes were a sheet of ice and he hadn't a dry stitch on. The rash disappeared. The boy, who is a great worker, became listless and, as he complained of feeling unwell, the doctor was called in who, after hearing all the circumstances, concluded there was a "mix up" between the rubella and the blizzard.

There was a very active diarrhea which could not be accounted for on the score of indiscretion or overindulgence in eating. "Wasn't this," the correspondent asks, "a catarrhal condition resulting from a cold contracted by being out in the blizzard? For the above condition I prescribed calomel, podophyllin and a saline laxative, followed by the sulphocarbolates. This treatment was effective, so it must have been all right. But—and here is where what to me appeared an anomalous condition existed. On trying his temperature, instead of finding (as I expected) fever, the thermometer persisted in indicating 95°F. No mistake about this, for I made repeated trials. The pulse-rate (don't fall over backward) was 39! I was alarmed, but said nothing, and administered cactus concentration, strychnine, quinine and nuclein, the first three of these every hour, the nuclein every two hours from about 4 p. m. till 2 a. m., at which time the thermometer recorded 96.6°F. with pulse 44. This treatment was kept up for two days, when temperature was normal. The pulse, however, is still only 61. I stopped the nuclein, but the cactus and strychnine are still being taken four times daily. What was the cause of this bradycardia and subnormal temperature? Was the treatment 'ethical' and such as you can endorse?"

We have read with interest the case here described. In the first place, Doctor, it is a question whether the conditions mentioned would not have appeared subsequent to exposure in any patient carrying a temperature? Secondly, rubella is ephemeral and an extremely mild disease, the eruption, as you know, appearing and disappearing frequently within twenty-four to forty-eight hours. Do we understand that the eruption was present before he started on the hunting trip but disappeared before he came home, or was the eruption noticed on his return, rapidly fading thereafter? You fail to state at just what stage of the disorder you found subnormal temperature. Moreover, while you mention the pulse-rate you do not say anything about its quality. We are not at all surprised at the diarrhea. This often follows intense chilling of the surface of the body and is caused by the resultant visceral congestion, the vessels of the skin being in a spastic condition and insufficient blood coming to the surface to maintain body-heat.

In these cases the patient bleeds into the splanchnic vessels—suffers indeed from a species of pseudo shock. It would be interesting to know what this patient's pulse-rate was before this disturbance. As you know, a pulse-rate of sixty is not so very uncommon. (One of the writer's associates had a patient whose pulse usually ran about 56.)

Moreover, the shock and internal congestion which was present, together with the debility due to the diarrhea and consequent malnutrition, would cause further depression of the circulation.

Your treatment was good, but we should have been inclined to give first of all a little glonoin and then the dosimetric trinity with cactus concentration. The latter and the arsenates with nuclein would be indicated at this particular stage. We should make a careful examination of the urine, also note condition of the stools. Deep breathing, brisk friction of the skin (anything which will improve oxygenation of the blood and improve superficial circulation) suggest themselves.

—

QUERY 5436. "Chimaphilin in Diabetes." W. R., Montana, asks as to our knowledge of chimaphilin as a remedy for diabetes mellitus, and whether it contains all

the medicinal properties of the plant? The doctor notes that "the dose of the fluid extract is 2 drams given at mealtime in a glass of milk" and desires to know whether chimaphilin contains "all the virtues of the plant as is claimed for the fluid extract." He would like to try it, and to know how much would equal 2 fluid drams of the fluid extract? He wants all the information we have regarding the virtues of chimaphilin.

We shall have to ask you, Doctor, to reverse your view-point. It is not how many grains of chimaphilin would equal 2 drams of the fluid extract, but how much chimaphilin is there in that quantity of fluid extract? It is one thing to say a fluid extract should represent so much of the active principle, but another whether it does. Experience proves that the strength of fluid extracts varies within very wide limits, and even a given sample may become stronger owing to evaporation of the menstruum, or weaker from precipitation.

Chimaphilin is a concentration from the leaves of chimaphila umbellata. The following is a quotation taken from W-A "Alkaloidal Therapeutics:"

"Chimaphilin is a concentration from the leaves of chimaphila umbellata (pipsissewa, prince's pine, ground holly, or wintergreen). The active principles are arbutin, chimaphilin, and several others not yet studied. The remedial virtues accredited to this plant are those of arbutin. It has also a volatile ingredient, as the infusion is said to possess a value that is lost in the decoction.

"Felter and Lloyd credit pipsissewa with diuretic, tonic, alternative and astringent properties. It increases waste and affects nutrition. It is used in scrofula and in chronic rheumatic and genitourinary affections. It relieves irritation of any part of the genitourinary tract, and improves the nutrition of the affected tissues. Its special field is in genital discharges with debility or scrofula. Cystitis with offensive urine, and urine loaded with mucus, mucopus or blood are benefited. Chronic pyelitis is also favorably influenced by pipsissewa, as well as chronic prostatitis, scrofulous ulcers, ascites, strangury, gleet, lithemia, etc.

"Specific Indications: Atony of the genitourinary organs, with lingering disorders, scanty urine, profuse mucus, pus or blood in urine, dysuria with smarting or burning pain, chronic irritation of urethra or prostate, relaxation of bladder-walls, chronic prostatitis with vesical catarrh.

"Ellingwood says chimaphila aids in restoring the excretory functions to a normal condition and removes irritation of the urinary tract, lesions of the skin and lymphatic glands, and removes waste matter from the blood, the result of defective metabolism. He finds its field in uricacidemia, dropsy with debility and anorexia, inflamed cervical, mesenteric or parotid glands, dropsy after exanthemata, chronic rheumatism, gout, nephritis, the late stages of typhoid fever with deficient excretion, and mammary tumors supposed to be cancerous. For acute rheumatism he advises a warm infusion to be given till it causes perspiration, and the same applied to the affected joints. Any virtue not due to the volatile ingredient may be much more easily obtained by the use of arbutin. Like it, pipsissewa blackens the urine."

The dose of chimaphilin is from 1-3 to 1 grain before meals and at bedtime.

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QUERY 5437.—"Arsenical Paste." A. W. A., Michigan, wishes to know if there is "a prepared arsenical paste for the removal of small epithelial growths that the sodium ethylate solution scarcely will remove?"

An arsenical paste is not listed, so far as we are aware. A description of our own method of procedure in such cases may aid you. Make a powder by triturating together arsenous acid, 1 dram, and acacia, 2 drams. At the time of application make up with distilled water of this into a paste of about the consistency of thick cream enough to cover the lesion. Cleanse the area thoroughly first with peroxide of hydrogen and then with boric-acid solution. Dry thoroughly with a cotton mop. Now apply this paste rather thickly and leave it on for twenty-four hours. Pain will be considerable and there will be some swelling and induration surrounding the part. At the

proper time remove the paste and apply poultices (nothing being better than the glycerinized clay-pastes), renewing constantly until the slough separates and falls away. Now you have a clean sore to deal with. Cleanse this well, dry, and apply a few small skin-grafts. Dress with prepared ox-blood on iodoform gauze, protecting the grafts with a strip of *perforated* rubber tissue: over the blood-soaked gauze (which comes next to the tissues of course) place another sheet of unperforated rubber tissue, to retain moisture, then some cotton and a snug bandage.

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QUERY 5438.—"The Treatment of Bronchopneumonia." F. J. P., Missouri, states that for years he has treated lobar pneumonia successfully with veratrine, aconitine, digitalin and strychnine, but often fails with these remedies in bronchopneumonia. "In fact," he says, "no treatment I can devise proves successful. What are your suggestions?"

The treatment of bronchopneumonia must vary to some extent; medicine indicated in one case or at a certain stage of the disease being quite useless elsewhere. There may be a pneumococcic affection or a simple streptococcic invasion. The child should be put to bed in a well-aired room kept at 68° or 70°F. Now that small, effective, portable oxygen generators are easily obtainable it is well, in severe cases, to have one on hand, instructing the nurse to allow the child to inhale for a few minutes whenever cyanosis or dyspnea becomes evident. Oxygen is a valuable therapeutic agent and only the impossibility of securing it in an available form has prevented the profession from resorting to it largely in diseases of this type. Dr. Booth has invented a most excellent little apparatus which generates pure oxygen only when and as needed. It is easily and instantly charged and a turn of a stopcock starts generation and gives rise to a steady flow of the gas. Another turn stops generation until a fresh supply is again needed.

For children of four years or under prescribe calomel, gr. 1-10 (with aromatics), podophyllin, 1 milligram, hourly for four doses, and follow the last dose with a saline laxative draught. Repeat the latter daily throughout the illness unless the bowels act freely. Older children will take calomel, gr. 1-6, podophyllotoxin, gr. 1-12, at similar intervals. Sponge the body with cool salt water every two hours if the temperature is high, and every hour give aconitine, digitalin and strychnine (the "defervescent compound"), dose according to age. Six dosimetric granules, each containing aconitine, 0.0005, veratrine, 0.0005; digitalin, 0.001, may be placed in a glass with 12 teaspoonfuls of water (2 drams of aromatic elixir may take the place of an equal quantity of water if desired), and of this 20 to 30 drops may be given at a dose. For young children a quarter-strength granule proves very useful. The child should have the chest well rubbed with a stimulating liniment (a mustard-leaf should be applied in severe cases) and then covered with cotton and an oilsilk jacket. Or apply one of the glycerinized kaolin pastes of the market, not too hot or too thick, however, since the child cannot breathe properly under a heavy load.

If the child is older than one year and strong, substitute veratrine (0.0005) for strychnine at first, but change to the latter at the very first sign of asthenia, or alternate the two. Give cactus concentration promptly if the heart wavers, and nuclein from the first, 8 to 10 drops three times daily. Surround the bed with a tent made of sheets and with a croup-kettle or a pan half filled with water on a small stove fill the enclosed space with medicated steam. Kerosene and oil of turpentine, of each a teaspoonful, work beautifully; eucalyptol serves as well (20 drops repeated overy two hours). As soon as the bowels have moved begin the resolute administration of the sulphocarbolates (in solution), giving as much as is needful in any way you can get it taken. Sometimes a few mouthfuls before a drink, sometimes a single good dose; some children will take the tablets (gr. 1) of sodium or calcium sulphocarbolate best, followed by water, of course. The zinc salt is not desirable alone unless diarrhea sets in. Small enemata of decinormal salt solution often are beneficial, and

we feel certain that small doses of asclepidin and ammonium benzoate are of service after the third or fourth day. As resolution sets in add sanguinarine. Change the child's position from time to time. Be sure that it gets plenty of fresh air to breathe.

If the case drags, alternate creosote (or creosote carbonate) and calx iodata. Brucine, cactus concentration, and quinine arsenate three times daily as the convalescent stage is reached, together with highly nourishing food in small quantities. Then, to prevent after-claps, arsenic iodide, one milligram, for several days after food. Maintain elimination and an active skin for at least one month.

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QUERY 5439.—"The Injection of Lobelia." N. M. C., Idaho, in a recent letter states that for the last two or three months he has been reading in the journals how they are curing diphtheria and doing a whole lot of good with specific lobelia exhibited hypodermically in 15- to 40-minim doses. The doctor was suffering from a boil on his face, causing the whole jaw to ache so he could not sleep, and he thought a hypodermic of lobelia might relieve it. He describes his experience thus: "Undertook to inject 15 minims. Injected one drop. Felt like actual cautery. Waited a little, then gradually pushed in three or four drops more —then stopped for good!" Being always inclined to try a new remedy on himself before giving it to the patient he thinks he was lucky this time that he did, since the patient he expected to try it on was a lady 75 years old. He wants to know *how* without chloroforming, cocainizing or "tying down" a doctor can get 15 to 40 minims of lobelia under a fellow's skin.

The lobelia-injection question is up for discussion and we are glad the doctor reported his painful experience. Specific lobelia, in fact any alcoholic preparation of lobelia, would probably cause a good deal of pain, but the severity would perhaps depend somewhat upon the location of the injection. Certainly the face is not a very favorable place for it. In the looser tissues of the arm, thigh, abdomen or back it should be quite endurable. Having had no personal experience we should be glad to hear from any of our readers who have tried it. Lobelin can be injected into the urethra or rectum and very prompt effect obtained. For instance when a stricture exists and it is not possible to pass a sound the injection of an aqueous solution of lobelin will cause almost immediate relaxation.

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QUERY 5440.—"An Obesity Soap." T. G. S., Wyoming, wants to know if we "can recommend a good obsesity soap?" We have tried hard to keep posted on the modern materia medica, but frankly, we must confess ignorance of the composition or nature of an "obesity soap." A member of our staff suggested (humorously) that it might be a superfatted soap, but as a matter of fact we cannot conceive of any soap which would serve as a solvent of fat upon the living body. If anyone knows of any soap recommended as being useful in obesity please pass on the information. Of course extremely alkaline soaps will dissolve and remove fats, but at the same time they would remove the skin, in fact they would have to remove the skin before they could act on the fat.

No, we cannot recommend any obesity soap. We have heard that a person eating soap will become thin. Much of course depends upon the soap eaten and the perseverance of the soap-eater.

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QUERY 5441.—"Bismuth Injections for Fistulæ." E. P. N., Pennsylvania, wants to know what we think of bismuth injections for fistula?

We have not yet had any personal experience with injections of bismuth into fistulous tracts, but are persuaded that they prove successful in the majority of cases. If you have not read Emil Beck's paper on the subject request of him a copy. Did you read Dr. Pennington's masterly article published in our January issue? Some of the best rectal surgeons are now using bismuth, and the results in almost every case appear to have been ideal—the fistulas giving no further trouble. The technic is simple.

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KEEP COOL DURING THE SUMMER

The inventive genius of man has done much to alleviate pain, to offset the discomforts of excessive heat or cold and to add to man's pleasure. One of the latest and most ingenious devices is the Automatic Fan Rocker described on page 37. The illustration suggests coolness and comfort. It is a pleasure to think that some means have been provided to furnish a portable cooling draft during the oppressive heat without the expensive electrical apparatus that is familiar to all of us. Five dollars, the cost of the apparatus, is not much to pay for a device which will afford years of solid comfort. See the announcement on page 37 of this issue and send your order to the Fan Rocker Co., 507 4th Ave., Juniata, Pa.

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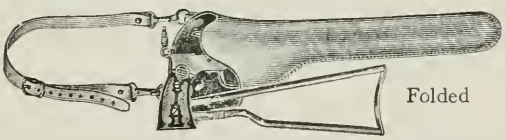

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this kind which renews youth and vigor, which brightens the eye, clears the brain and steadies the hand.

Physicians are good sportsmen. They realize the value of outdoor life and the occasional throwing off of work and worry. Then, too, they appreciate that in hunting or fishing, as in medicine or surgery, the most accurate tools that can be obtained should always be used.

This explains why doctors are interested in Marble's Game Getter Gun shown on page 55 of this issue of CLINICAL MEDICINE.

This is an all-around gun. It can be used either as a target rifle or pistol, a big game gun or a shot gun. It consists of two barrels, one a 22 caliber and the other a 44 smooth 12-inch barrel. The weight is 2¼ pounds.

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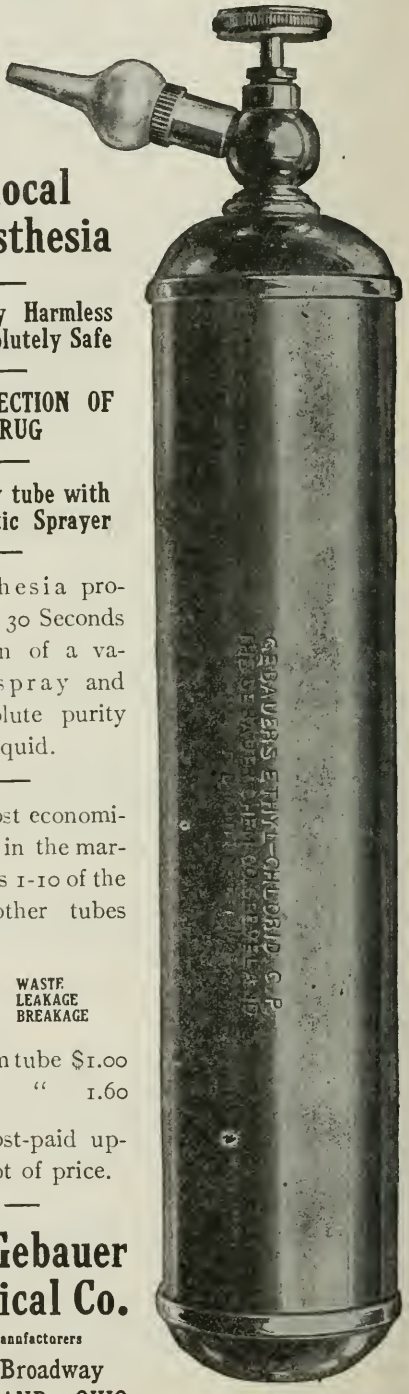

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THE GYNECOLOGICAL USES OF SALIPYRIN

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In the following year, Bigelow, an American observer, described Salipyrin as a valuable and useful remedy in uterine diseases, the symptomatology of which rested upon a neuralgic basis.

In the same year, also, Kayser reported the favorable effects of Salipyrin in uterine hemorrhage, in that which often precedes the climacteric period, and in various losses of an irregular nature. His observations were confirmed by Orthmann, who communicated the results of the use of the drug in 50 cases of uterine hemorrhage from various causes.

The most striking testimony, however, to the use of Salipyrin in gynecological work, comes from O. Beuttner, whose experience of the drug extended over a number of years and in whose hands it yielded results of a remarkable nature. He praises its favorable effects upon the simple forms of uterine hemorrhage and its sedative action in menstrual disorders. It was stated to be particularly effective in the emotional depression of the premenstrual and menstrual periods.

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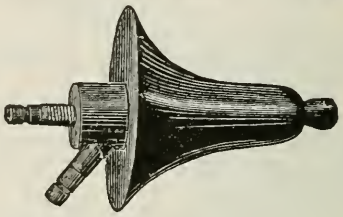

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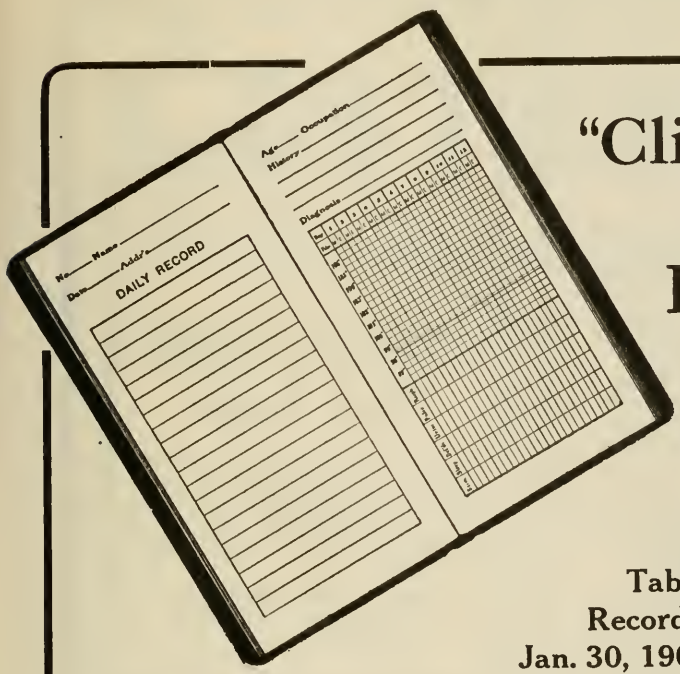

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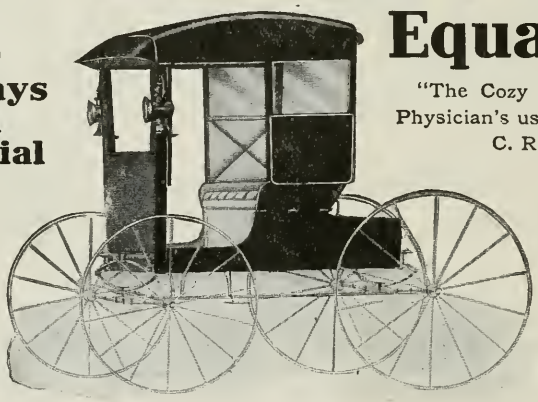

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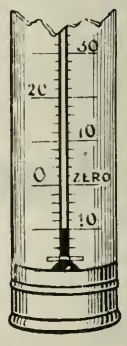

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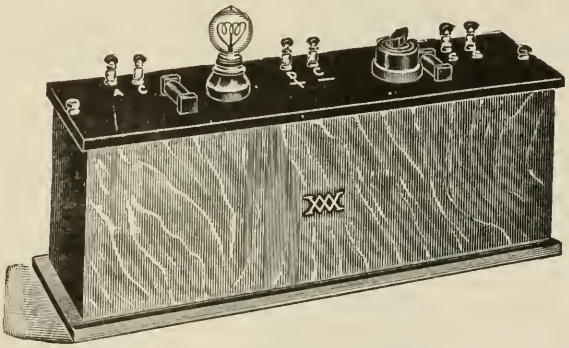

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During recent years much has been said and written concerning the value of antiseptics and the wonderful changes wrought by their use have been little short of marvelous.

A large percentage of the pelvic diseases occurring in the female are of bacterial origin and the recognition of this fact and the application of the modern principles of alkaline antiseptics are responsible for the relief of many cases which were formerly a source of great anxiety to both patient and physician because of their intractability.

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There is not the slightest doubt but that many of the inflammatory diseases to which women are liable may be prevented by absolute cleanliness and the use more or less regularly of a suitable antiseptic.

We have at our disposal numerous agents possessing decided antiseptic properties, but unfortunately the usefulness of many of these is limited by other properties of an objectionable nature.

The use of any remedy which has a tendency to produce induration or thickening of the tissues with which it comes in contact should be discouraged, as should also those agents which, while decidedly antiparasitic in their action, are too irritating to be used with safety on the delicate tissues of the vagina.

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The extravagant care with which we guard your interests in the making of this famous tonic, which we have manufactured for almost half a century, cannot be appreciated by one not familiar with the facts. But the name of "Pabst" is a guarantee of quality in itself. The endorsement of your brother physicians is one of our greatest prides.

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Delegates to the American Medical Association this year will have the pleasure of a trip on special train over the picturesque "Big Four and C. & O." route through the resort region of the Virginias, and an opportunity of visiting Hot Springs, the most aristocratic of the old southern resorts.

The "Missouri Valley and Southwest Special" will be composed of the finest Pullman palace sleeping and dining cars, observation and library car, and will run solid through to Altantic City without change. The train will leave St. Louis on Saturday, June 5, at noon, over the Big Four C. & O. railways via Indianapolis, Cincinnati and Washington.

Sunday at Hot Springs.—We shall spend Sunday at Hot Springs, Va., a beautiful resort in the Allegheny Mountains, where our entire party will be the guests at luncheon of Mr. Fred Sterry, manager of the famous "Homestead" hotel. The day will be spent in sight-seeing. Leave Hot Springs 5 p. m., arriving at Atlantic City on Monday morning, June 7, in ample time to register and attend the House of Delegates and auxiliary meetings before the opening of the American Medical Association on Tuesday.

Rates.—The Central Passenger Association has announced a round-trip rate of one and one-half fare from St. Louis, $33.40, and a similar rate is expected from other passenger associations.

A special car will leave Omaha on the evening of June 4, at 6:30 o'clock, via the "Wabash." From Kansas City and St. Joseph the service will be via the "Missouri Pacific," leaving St. Joseph at 7:40 o'clock p. m. and Kansas City at 11:00 o'clock, p. m., same evening, arriving at St. Louis early next morning, allowing about four hours in the city.

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State, county and district societies are cordially invited to join our party. Let us make the attendance at the A. M. A. from the West this year a record-breaker. For itinerary and reservations, address Dr. Chas. Wood Fassett, secretary, St. Joseph, Mo.

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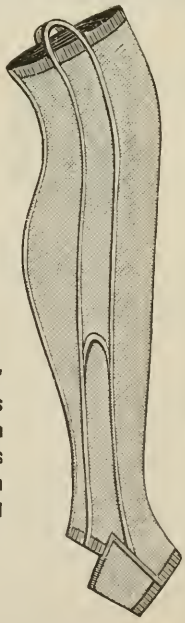

The old style soon tear apart through the straining when pulling them on and off.

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Sig.: Paint over the region covering the nerve and apply gentle massage if possible.

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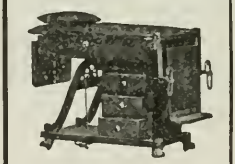

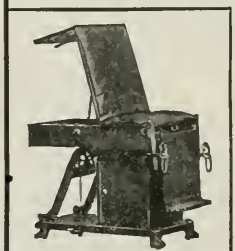

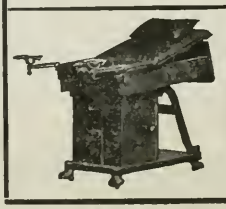

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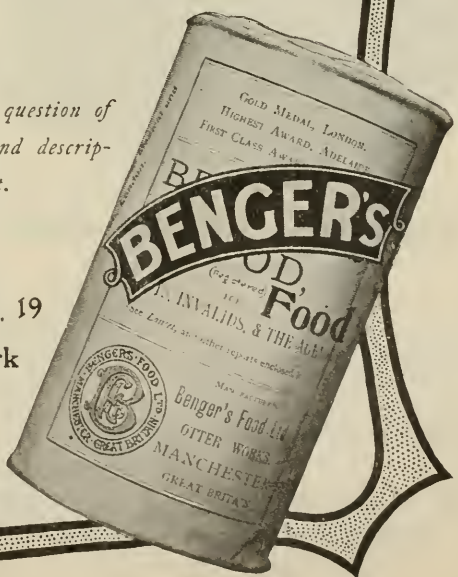

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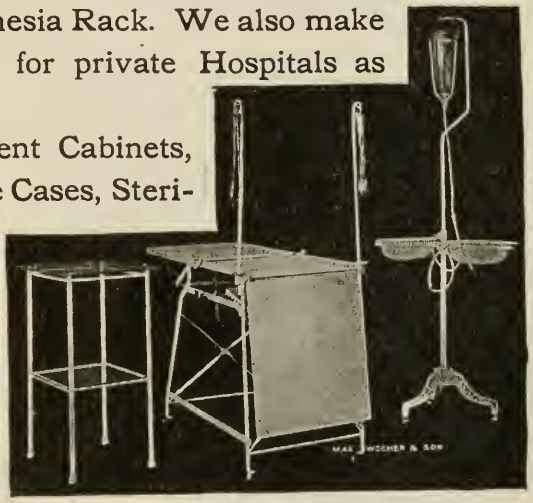

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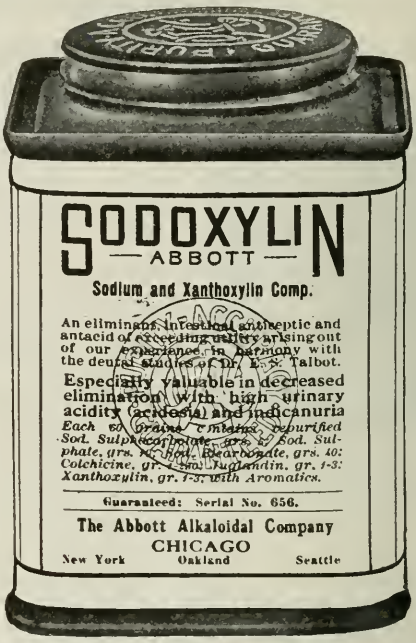
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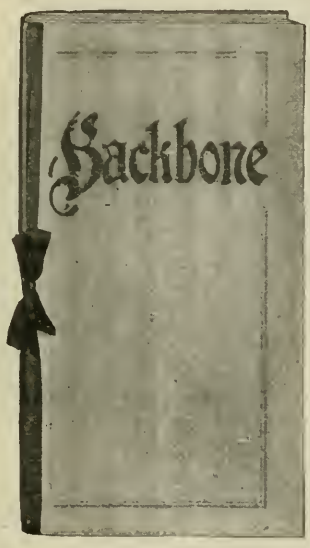

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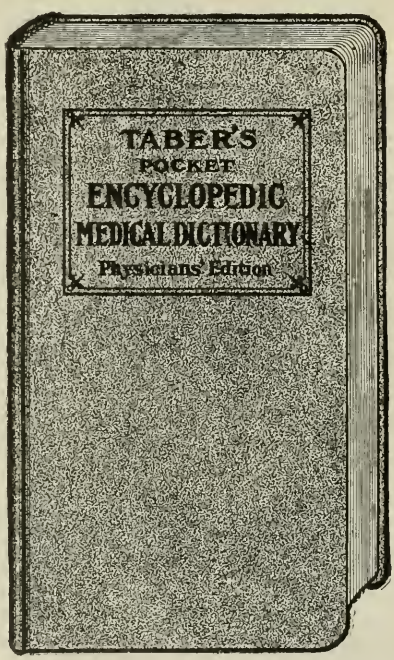

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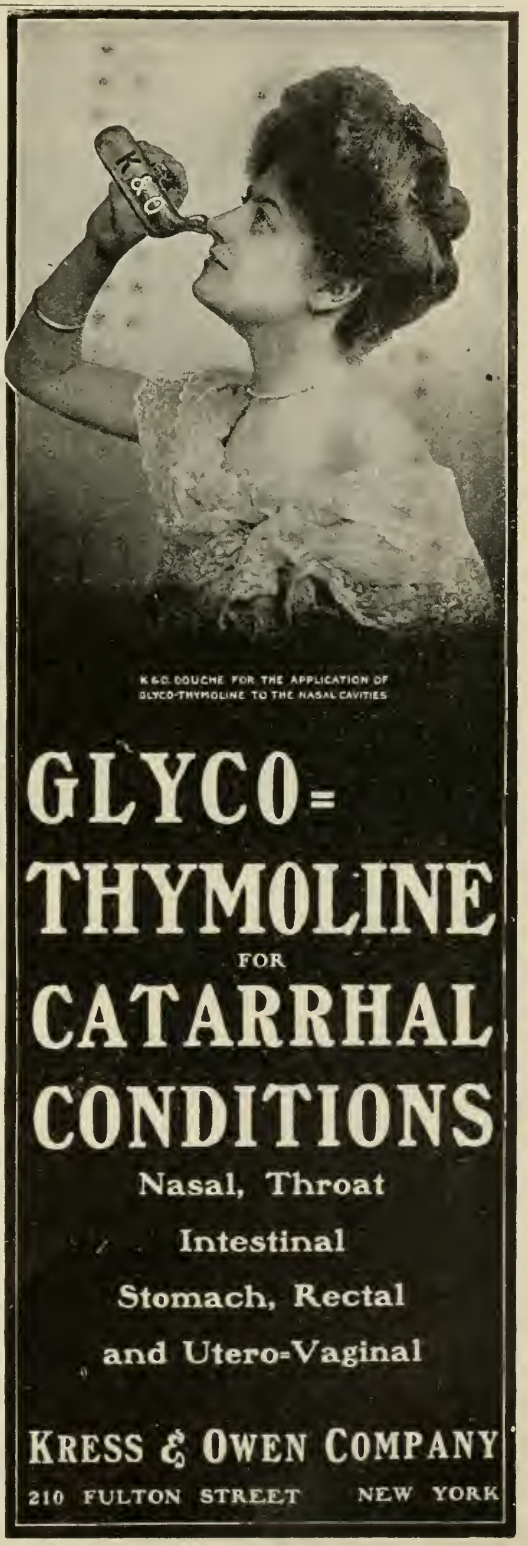

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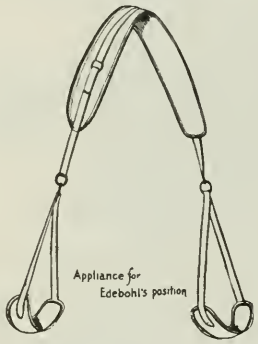

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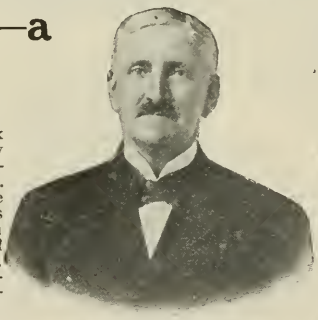

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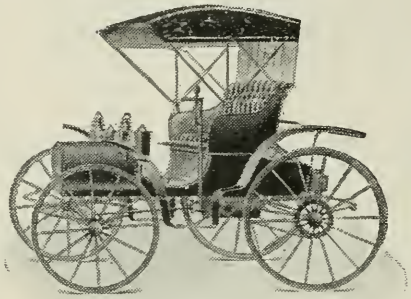

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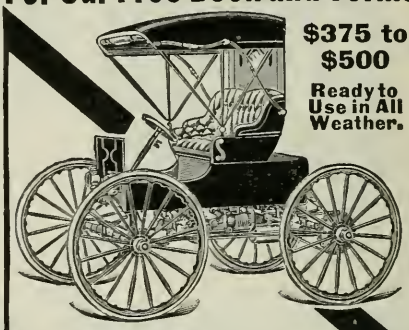

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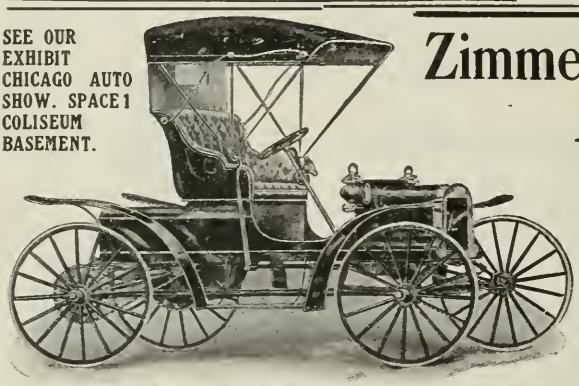

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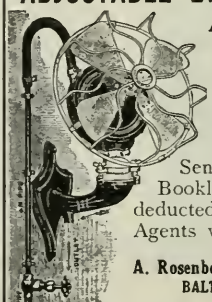

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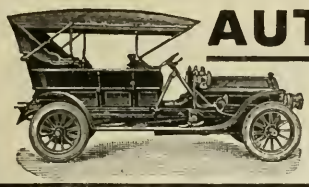

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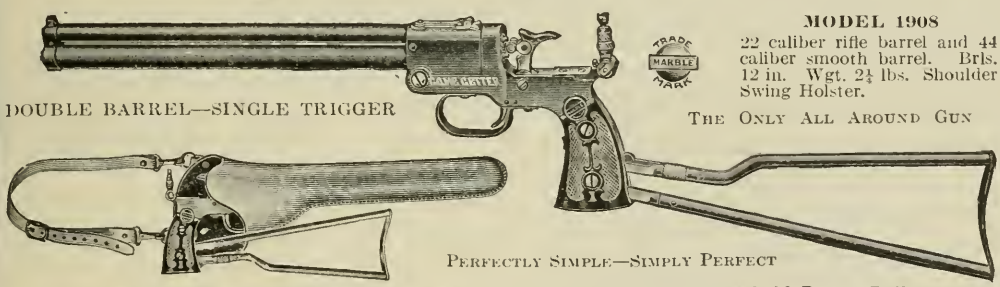

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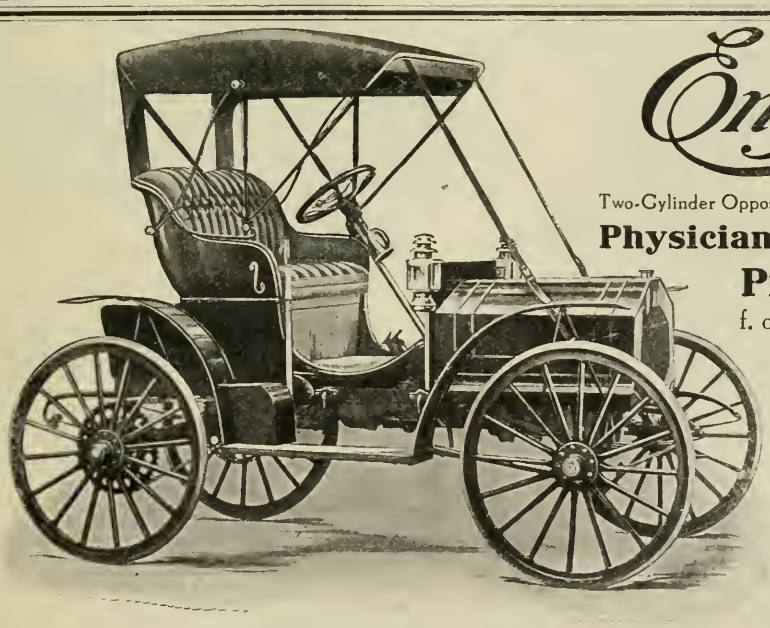

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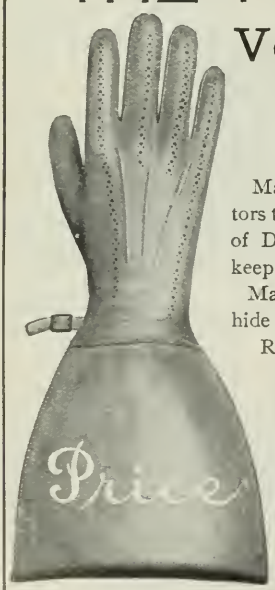

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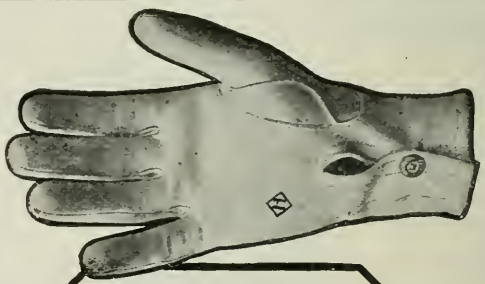

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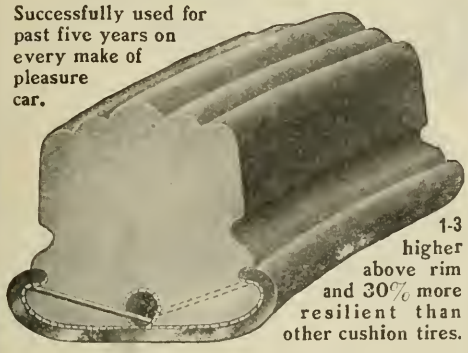

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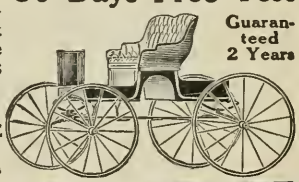

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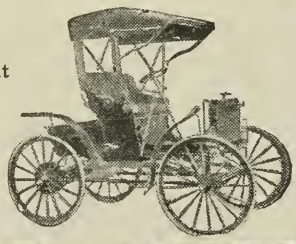

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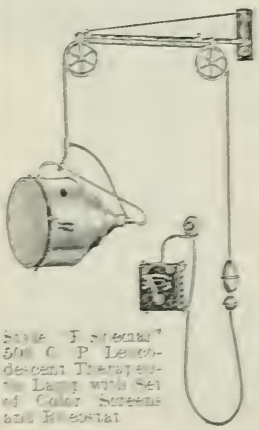

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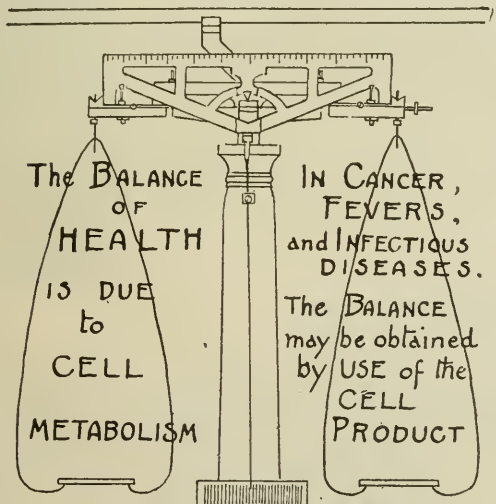
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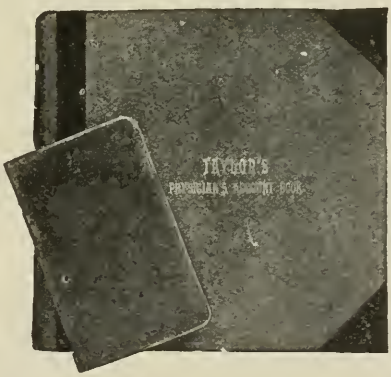

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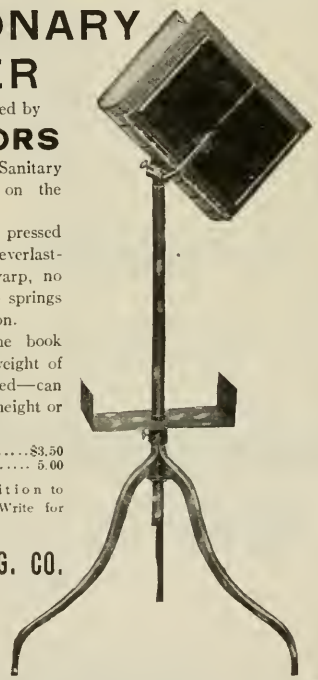

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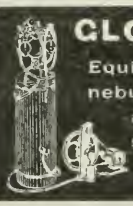

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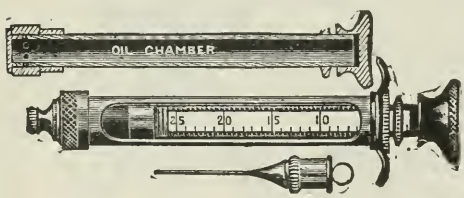

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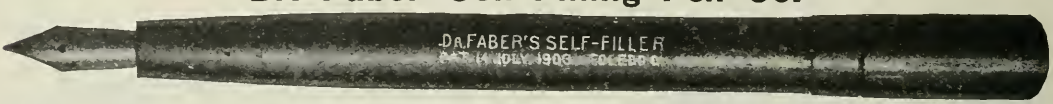

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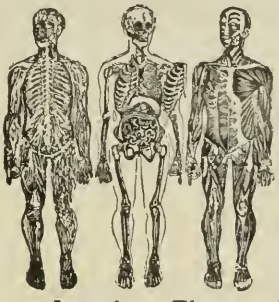

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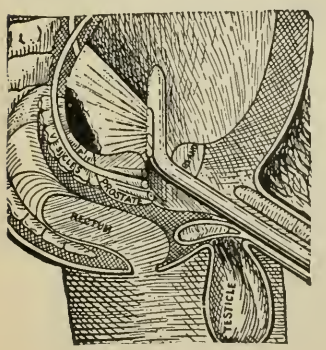

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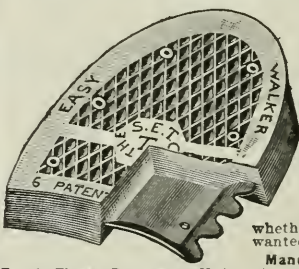

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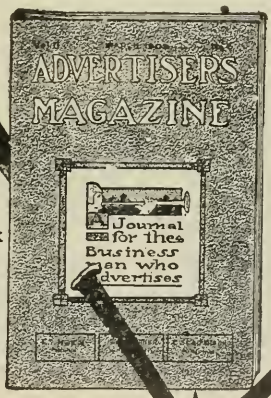

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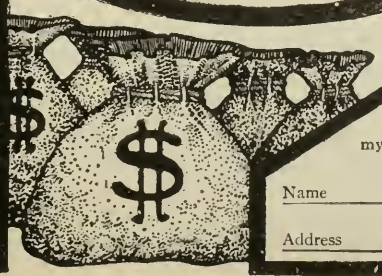

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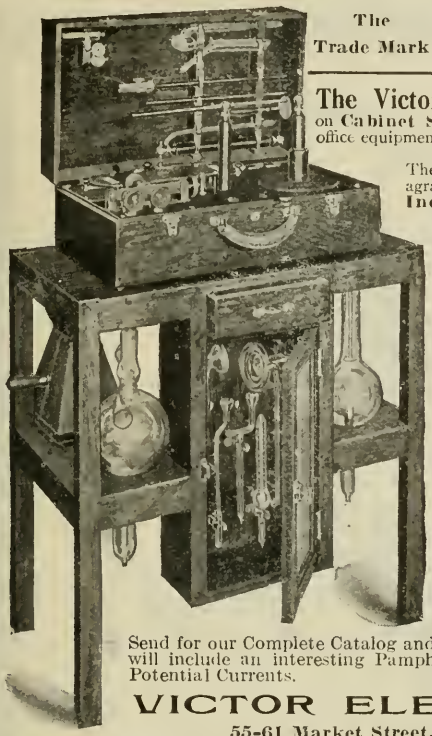

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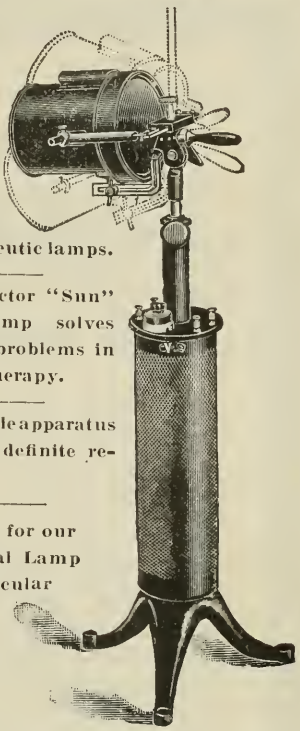

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Leading features in the May Recorder will be: The third instalment of "Nan"; "Paraffin in Hernia", by Dr. Chas. C. Miller, of Chicago; "Psycho-Therapy vs. Drugs", by Dr. Geo. L. Servoss, of Fairview, Nev.; "Ureteral Calculus", by Dr. Byron Robinson, of Chicago.

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for use from Birth to 3 months	for use From 3 to 6 months	for use From 6 months upwards

A Descriptive Pamphlet, giving Analyses, etc., and samples of the Foods, will be sent on request

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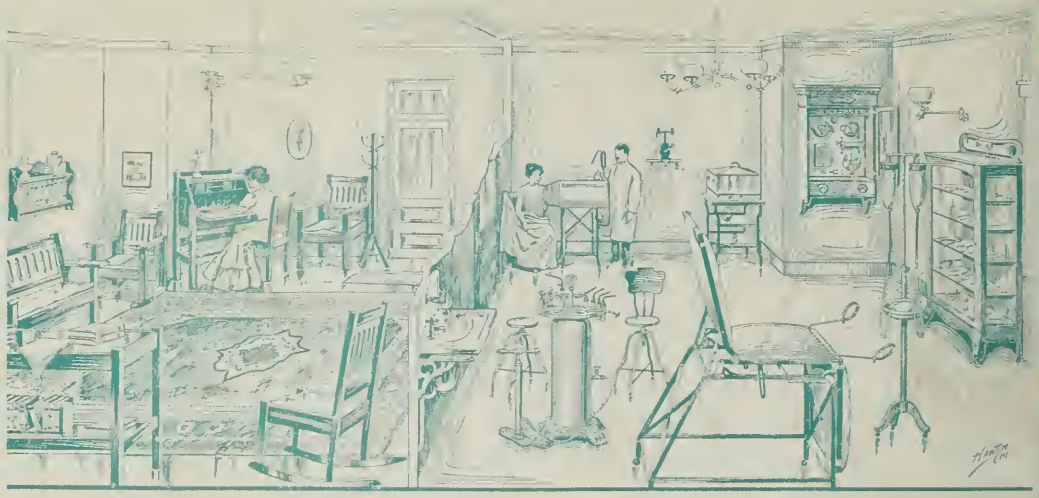

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